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THE CONOPIDAE OF SOUTH AFRICA

By O. KRÖBER

THE THEREVIDAE (DIPTERA) OF SOUTH AFRICA

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THE SPHEGIDAE OF SOUTH AFRICA

PART XV

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THE SPHEGIDAE OF SOUTH AFRICA

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APPENDIX IV

With 51 Text-figures

IN the following pages, which will conclude this monograph, those species of *Cerceris* already known from the Ethiopian Region and not dealt with in Dr Brauns's paper will be described, and the descriptions of several new species, chiefly from the collection of the British Museum, will also be given. Some species, found in or near the Nile Valley, have been omitted, as they probably belong to the Mediterranean portion of the Palaearctic Region. Two of Dalhobm's species have also been omitted, since they are insufficiently described; these are *formosa* and *lunigera*.

Following the latter, I have added the descriptions of a few new species of other genera which have come to my notice recently, and in order to make the work as complete as possible, I have also appended copies of descriptions of new species published by Turner and Parker since the issue of Part XI of this work.

For the females of *Cerceris* it has not been found practicable to arrange a key to the species which is entirely dichotomic, they have therefore been placed under several sections according to the structure of the clypeus. The key to the males is not altogether satisfactory, since it is based for a large part on colour differences. This, however, is unavoidable, since in this sex the structural characters are neither pronounced nor clearly differentiated in certain groups of species.

Measurements of the petiole are taken on the tangent to the dorsal surface and not along the curvature of the segment. The structure of the hind tibiae furnishes a character of some minor but definite value in the identification of species. This consists of the number of serrations on the upper edge of the limb. In enumerating these serrations, which are flanked by a single spine, a basal and an apical projection are not included. The former is an extension of the articular ridge and, like the apical prominence, may be recognised by having several small

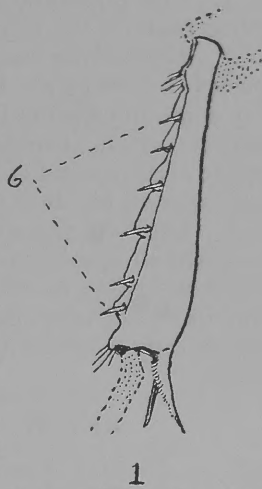


Fig. 1. Hind tibia, showing six serrations on the upper margin.

- (1) 2. Triangular area of the epinotum longitudinally or obliquely striate, the apical fourth sometimes transversely so; wings hyaline, the apex with a fuscous cloud, sometimes feebly fuscous all over.
- (6) 3. Frontal carina produced below into a tooth or curved spine.
- (5) 4. Frontal carina produced below into a curved, acute and downwardly directed spine; tergites pale straw-yellow, more or less black at the base, the pygidial area black. *eburneofasciata* Brauns
- (4) 5. Frontal carina produced below into a short blunt tooth; tergites ferruginous, the second to fourth with yellow apical bands, the third and fourth black at the base, the pygidial area ferruginous. *Kobrowi* Brauns
- (3) 6. Frontal carina simple.
- (8) 7. Mesonotum reticulate-punctate; pygidial area black, abdomen black and lemon-yellow. *illustris* Arn.
- (7) 8. Mesonotum longitudinally rugose and punctured between the rugae; pygidial area and the fifth segment more or less ferruginous or fusco-ferruginous.
- (10) 9. Small species, 8 mm. long. Second sternite with a median longitudinal ridge which almost reaches the apical margin, depressed on each side of the ridge. *xosa* Brauns
- (9) 10. Larger species, 12 mm. long. Second sternite with a semicircular platform at the base. *dondoensis* Brauns
- B. Median area of the clypeus with a projecting lamina which is entirely free down to its base.
- (12) 11. Anterior margin of the lamina deeply excised in the middle (abdomen ferruginous). *proteles* Brauns
- (11) 12. Anterior margin of the lamina entire.
- (14) 13. The lamina narrowed towards its apex and twice as long as wide there (abdomen black and yellow). *repraesentans* Turner
- (13) 14. The lamina wider than long and not narrowed towards the apex, which is strongly arcuate.
- (16) 15. Apical margin of the pygidial area trisinate (abdomen ferruginous). *bicolor* Smith
- (15) 16. Apical margin of the pygidial area feebly concave (abdomen ferruginous, the first segment black). *pictiventris* Gerst
- C. Median area of the clypeus with more or less of its basal portion raised and protruding, overhanging the lower or anterior portion; seen from in front, shaped like a broad plate which is flat or convex and more or less free at its anterior margin¹. Seen from the side, the projection is more or less nasiform. (Not to be confused with Sections D and F. *C. Arnoldi* placed in Section H almost comes within this section, but the lamina is not nasiform.)
- (18) 17. Triangular area of the epinotum smooth and shining; petiole long, three-fourths longer than wide and fully as long as the second tergite (colour mainly black). *erynnis* Arnold
- (17) 18. Triangular area of the epinotum not smooth and shining; petiole wider than long or about as long as wide.
- (28) 19. Triangular area of the epinotum closely reticulate-punctate.
- (21) 20. Petiole fully twice as wide as long (large species, 18-20 mm. long, colour black and red, the apical two-fifths of the wings deep fuscous). *natalensis* Sauss.

¹ To avoid circumlocution this margin is referred to in this key as the pre-apical margin.

- (20) 21. Petiole trapezoidal, about as long as wide at the apical margin.
- (25) 22. The raised basal portion of the clypeus ends close to the apical margin, its plane being also almost parallel with that of the face.
- (24) 23. Thorax black, with yellow markings. Pygidial area almost rectangular. *Schultzei* Bischoff
- (23) 24. Thorax black, without yellow markings, the pronotal collar sometimes with a pale ferruginous spot on each side. Pygidial area barrel-shaped. *africana* Cam.
- (22) 25. The raised basal portion of the clypeus strongly protruding apically, its plane forming an angle of about 30° with that of the face.
- (27) 26. Thorax black and ferruginous, richly variegated with lemon-yellow; abdomen lemon-yellow and ferruginous, the tergites without conspicuous pubescence. *africana*, race *Kalaharica* Bischoff
- (26) 27. Thorax black and ferruginous, the metanotum pale yellowish white; abdomen with narrow yellowish white apical bands on the first two or three tergites. Tergites 3-5 with a dense olive-yellow pubescence, very conspicuous at certain angles. *bulawayoensis* Brauns
- (19) 28. Triangular area of the epinotum striate.
- (30) 29. Triangular area of the epinotum longitudinally striate; pre-apical margin of the clypeus obtusely angularly emarginate. *Schoutedeni* Brauns
- (29) 30. Triangular area of the epinotum obliquely striate; the pre-apical margin of the clypeus arcuate or transverse.
- (32) 31. Petiole fully twice as wide as long; mesopleurae with two tubercles; wings flavo-hyaline, the apical margin fuscous; fairly large species, 17-18 mm. long; head and thorax black and ferruginous, the abdomen ochreous yellow, rufescent apically. *diodonta* Schlett.
- (31) 32. Petiole about as long as wide; mesopleurae unarmed; wings hyaline, infuscated on the costal margin and at the apex; smaller species, 7-12 mm. long; abdomen in greater part black, with yellow markings. *ruficauda* Cam.

D. Median area of the clypeus with a long nasiform protuberance, more or less conical when seen from above, arising from either the upper part of the area or covering the greater part of its length, not rising from near the anterior margin only. (*C. oraniensis* of Section E almost falls within this section.)

- (34) 33. The nasiform protuberance rises from the upper third or so of the median area; the latter is about as long as wide. *rostrifera* Brauns
- (33) 34. The base of the protuberance covers nearly the whole length of the median area; the latter is much wider than long.
- (36) 35. Head very wide, about twice as wide as high; the apical half of the clypeal protuberance is flat underneath; large and robust species, the greater part of the head, the thorax and the petiole black, the abdomen ochreous; pygidial area ferruginous, wings fuscous. *iniqua* Kohl
- (35) 36. Head much less than twice as wide as high; clypeal protuberance not flat underneath; fairly slender species; black, abundantly variegated with lemon-yellow, the back of the head more or less ferruginous; wings pale flavo-hyaline, the apex slightly fuscous.

rhodesiae Brauns

E. Clypeus with a tubercle in the middle of the apical margin or with a tubercle a little behind the margin, the median area much wider than long (except in *synagroides*), its apical third not deflected over its whole width.

- (38) 37. Very large species, 30 mm. long. Black, the fourth and fifth tergites orange-yellow, wings fusco-violaceous. *synagroides* Turner
- (37) 38. Smaller species, length not exceeding 15 mm.
- (40) 39. Triangular area of the epinotum smooth and shining, grooved down the middle, with traces of oblique striae only in the basal angles. *arrogans* Arn.
- (39) 40. Triangular area of the epinotum striate.
- (42) 41. Petiole twice as wide as long; triangular area of the epinotum strongly, transversely and slightly arcuately striate (head, excepting the clypeus and sides of the face, and the thorax, black; abdomen ferruginous, paler at the base, wings fuscous). *arida* Arn.
- (41) 42. Petiole much less than twice as wide as long.
- (44) 43. The tubercle on the clypeus forms a low cone which extends over nearly the whole length of the area and is compressed below, *i.e.* carinate. (Colour mainly chrome-yellow, with black markings; the pygidial area is distinctly narrower at the base than at the apex; mesopleurae with one prominent tubercle.) *oraniensis* Brauns
- (43) 44. The tubercle on the clypeus small and not conical.
- (46) 45. Median area of the clypeus with a very short portion inflected in front, the junction of the two planes forming a prominent margin which is tuberculate in the middle. The upper part of the mesopleurae below the wing-bases is much swollen and plainly visible from above. Pygidial area not narrower at the base than at the apex, finely and closely rugose. *bothavillensis* Brauns
- (45) 46. Median area of the clypeus with a small triangular tubercle in the middle of the apical margin; mesopleurae not swollen above; pygidial area narrower at the base than at the apex, coarsely punctate and rugose. *dejecta* Arn.
- F. Apical third or half of the median area of the clypeus inflected, the inflected part with a low median carina or with a small tubercle on its upper margin.
- (50) 47. Mesonotum and scutellum distinctly longitudinally rugose and punctured between the rugae.
- (49) 48. Tergites fairly sparsely punctured; pygidial area rounded at the apical margin; posterior tibiae with five serrations; inflected part of the clypeus with a carina. *placita* Arn.
- (48) 49. Tergites closely punctured; pygidial area transverse at the apical margin; posterior tibiae with seven serrations; inflected part of the clypeus with a tubercle on its upper margin. *armaticeps* Cam.
- (47) 50. Mesonotum and scutellum without distinct longitudinal rugae.
- (52) 51. The sculpture of the mesonotum and scutellum consists of a close and very fine fundamental puncturation on which a larger, sparse and shallow puncturation is superimposed. Inflected part of the clypeus with a median carina. *rufiscutis* Cam.
- (51) 52. Mesonotum and scutellum coarsely and fairly closely punctured. Inflected part of the clypeus with a median tubercle on its upper margin. *raptor* Smith
- G. Median area of the clypeus flat, wider than long, the anterior margin slightly reflected or produced over the greater part of its width into a subcrescentic and porrect lamina.
- (54) 53. Median area of the clypeus with a porrect lamina. Scutellum longitudinally rugose and punctured; triangular area of the epinotum dull, coriaceous, fairly finely and closely rugose longitudinally. *erythrourea* Cam.

- (53) 54. Median area of the clypeus with the anterior margin slightly reflected. Scutellum punctured, without rugae; triangular area of the epinotum shining, sharply and transversely striate or costate.
charimorpha Brauns
- H. The median area of the clypeus is recurved for a short distance in front; the pre-apical margin which overhangs the recurved portion when viewed from in front is either arcuate or angularly emarginate. (In *C. Arnoldi* owing to the depth of the recurved part there is a short free lamina; *C. sumptuosa* of Section I might almost be placed within this one.)
- (68) 55. Triangular area of the epinotum distinctly striate or rugose.
- (57) 56. The pre-apical margin of the clypeus is narrower than the apical and ends on each side in a blunt tooth which is as long as wide, the space between the teeth deeply and arcuately emarginate. Pygidial area pyriform, twice as wide at the apex as at the base.
macololo Brauns
- (56) 57. The pre-apical margin without discrete teeth, angularly or arcuately emarginate.
- (61) 58. The pre-apical margin angularly emarginate.
- (60) 59. Median area of the clypeus much wider than long, the lateral angles bluntly dentiform, the lateral angles of the pre-apical margin extending almost as far as the apical; pygidial area closely and finely wrinkled.
latifrons Bingham
- (59) 60. Median area of the clypeus about as long as wide, the lateral angles of the apical margin not dentiform. Pygidial area coarsely punctured on the basal half, finely coriaceous on the apical.
kilimandjaroensis Cam.
- (58) 61. The pre-apical margin feebly arcuate or almost straight.
- (63) 62. Petiole one-third longer than wide (Black; sides of the face, the frontal carina and narrow apical bands on the second and third tergites, pale yellow.)
monticola Arn.
- (62) 63. Petiole shorter.
- (65) 64. Petiole wider than long. Triangular area of the epinotum coarsely rugose, longitudinally so except in the apical angle. *Hamiltoni* Arn.
- (64) 65. Petiole about as long as wide.
- (67) 66. Triangular area of the epinotum transversely rugose. (Black; sides of the face, frontal carina, apical bands on the second and third tergites, pale yellow; femora and tibiae black and ferruginous.)
Stevensoni Brauns
- (66) 67. Triangular area of the epinotum irregularly rugose, the apex transversely striate. (Black; richly variegated with lemon-yellow, the legs also mainly of that colour.)
mazimba Brauns
- (55) 68. Triangular area of the epinotum smooth and shining, sometimes punctured; if striate, then so only in the basal angles, or with two ill-defined median longitudinal carinae.
- (74) 69. Pre-apical margin of the clypeus obtusely, angularly emarginate.
- (73) 70. The lateral angles of the pre-apical margin extend beyond the apical margin.
- (72) 71. Triangular area of the epinotum very convex, smooth and shining, not grooved down the middle.
languida Cam.
- (71) 72. Triangular area of the epinotum smooth and shining, grooved down the middle, the groove crenate, the base with one or two transverse striae.
pearstonensis Cam.

- (70) 73. The lateral angles of the pre-apical margin do not extend beyond the apical margin; triangular area of the epinotum with two ill-defined median longitudinal carinae, the space between them wrinkled, the sides with one or two oblique rugae, the apex transversely rugose.
nigrostoma Brauns
- (69) 74. Pre-apical margin of the clypeus arcuately emarginate or straight and very close to the apical margin.
- (76) 75. Median area of the clypeus convex, its pre-apical margin straight, close to the apical and bluntly conical in the middle. (Very coarsely punctured species; black, with yellow bands on the tergites; pygidial area coarsely punctured and rugose, about as wide at the base as at the apex, subrectangular.)
amatoria Arn.
- (75) 76. Pre-apical margin of the clypeus arcuately emarginate.
- (78) 77. Median area of the clypeus very wide, nearly three times wider than long; the raised basal portion is equally as wide, convex transversely, its apical half forming a free lamina. Triangular area of the epinotum fairly strongly and closely punctured, sparsely punctured down the middle. (Brownish red, the sides of the face, the clypeus, second tergite except in the middle and a narrow apical band on the third tergite, yellow.)
Arnoldi Brauns
- (77) 78. Median area of the clypeus much narrower.
- (80) 79. Pre-apical margin of the clypeus rectangular at the corners; second sternite convex and not carinate. (Small species, 6 mm. long; petiole red.)
amakosa Brauns
- (79) 80. Pre-apical margin with a short lamelliform lobe on each side; second sternite longitudinally carinate or at least somewhat raised medially and depressed on each side.
- (82) 81. Femora black, tibiae and tarsi in greater part yellow; mesopleurae with a triangular tubercle.
macalanga Brauns
- (81) 82. Femora pale ferruginous; mesopleurae unarmed.
- (84) 83. Petiole red, a little longer than wide; shoulders of the pronotal collar, metanotum and posterior half of the scutellum, yellow; triangular area of the epinotum very convex.
reginula Brauns
- (83) 84. Petiole black, about as long as wide; a thin streak on the metanotum yellow, otherwise the thorax is entirely black; triangular area of the epinotum fairly flat.
tingo Brauns
- I. Median area of the clypeus simple, flat or convex, or convex at the base and more or less concave in front.
- (88) 85. Apical margin of the pygidial area quadridentate.
- (87) 86. Triangular area of the epinotum smooth and shining; black, the second and third abdominal segments and the first partly, ferruginous.
quadridentata Arn.
- (86) 87. Triangular area of the epinotum dull, microscopically and longitudinally aciculate; thorax and abdomen with pale yellow or yellowish red markings.
emeryana Grib. var. *varilineata* Cam.
- (85) 88. Apical margin of the pygidial area not quadridentate.
- (102) 89. Mesopleurae with one or more distinct tubercles.
- (91) 90. Triangular area of the epinotum strongly and obliquely striate.
orangiae Brauns
- (90) 91. Triangular area of the epinotum smooth and shining, sometimes with a sparse puncturation.
- (93) 92. Mesopleurae with three triangular lamellate tubercles; anterior face of the pronotal collar marginate at the sides, the raised margin ending below in a tooth which is plainly visible from above. (Petiole longer than wide, wider at the base than at the apex.)
egena Arn.

- (92) 93. Mesopleurae with less than three tubercles; pronotal collar not marginate in front.
- (95) 94. Apical margin of the pygidial area excised on each side near the lateral angles, so that the latter are acutely dentiform. (A very shining and sparsely punctured species, in greater part yellow, the abdomen yellow, the apical margins of the segments fusco-ferruginous, the pygidial area pale red.) *Turneri* Arn.
- (94) 95. Apical margin of the pygidial area transverse or rounded.
- (97) 96. Median area of the clypeus a little longer than wide, convex, its apical margin transverse and angular on each side. (Mesopleurae with one tubercle.) *Hausa* Arn.
- (96) 97. Median area of the clypeus wider in front than long.
- (99) 98. Thorax black and ferruginous, abdomen chrome-yellow, the pygidial area fusco-ferruginous. (Mesopleurae with two tubercles.) *curvitaris* Schlett.
- (98) 99. Thorax entirely black, or black with straw-yellow markings.
- (101) 100. Pygidial area rectangular, the apical angles obliquely truncate; thorax with straw-yellow markings; declivity of the epinotum with fine transverse striae over the middle third. *uncta* Arn.
- (100) 101. Pygidial area sub-elliptical, the apical margin rounded; thorax entirely black; declivity of the epinotum punctured. *gomphocarpi* Brauns
- (89) 102. Mesopleurae without distinct tubercles.
- (112) 103. Triangular area of the epinotum striate or rugose.
- (107) 104. Triangular area of the epinotum longitudinally and coarsely striate.
- (106) 105. Face and clypeus black; median area of the clypeus fully as long as wide, the anterior margin excised in the middle, the lateral angles lamelliform and rounded. Triangular area of the epinotum coarsely striate, transversely so in the apical angle. *dominicana* Brauns
- (105) 106. Face and clypeus with yellow markings. Median area of the clypeus wider than long, the anterior margin almost straight. Triangular area of the epinotum feebly striate, the striae often obsolescent towards the apex. *nigrifrons* Smith
- (104) 107. Triangular area of the epinotum obliquely striate, the striae sometimes not reaching the median groove.
- (109) 108. Median area of the clypeus convex, the pre-apical margin very close to the apical, excised in the middle, the lateral angles slightly projecting. Pygidium black, the pygidial area broadly barrel-shaped. *sumptuosa* Arn.
- (108) 109. Median area of the clypeus convex at the base, distinctly concave anteriorly, the anterior margin feebly convex, rectangular at the corners. Pygidium ferruginous, the pygidial area ovate.
- (111) 110. Median area of the clypeus a little longer than wide in front. *Yungvei* Cam.
- (110) 111. Median area of the clypeus as wide as long. *vumbui* Arn.
- (103) 112. Triangular area of the epinotum smooth, sometimes also punctured, but not striate.
- (116) 113. Median area of the clypeus slightly excised in the middle of the anterior margin, bluntly dentate on each side of the excision.
- (115) 114. Clypeus with a short, shallow and longitudinal depression behind each of the teeth on the anterior margin. Pygidial area longitudinally and coarsely rugose, a little wider at the base than at the apex. *Barnardi* Brauns
- (114) 115. Clypeus with a small depression between the teeth on the anterior margin. Pygidial area closely and more or less transversely rugose, much narrower at the base than at the apex. *ponderosa* Arn.

- (113) 116. Median area of the clypeus not excised in the middle of the anterior margin; if with teeth, then these are so small that the margin is merely crenulate.
- (120) 117. Median area of the clypeus with two very small tubercles just behind the anterior margin.
- (119) 118. Median area of the clypeus as long as wide in front. Face and clypeus black. *Isis Arn.*
- (118) 119. Median area of the clypeus wider in front than long. Lower part of the face and the clypeus yellow. *inconspicua Arn.*
- (117) 120. Median area of the clypeus without tubercles behind the anterior margin.
- (122) 121. Median area of the clypeus distinctly wider in front than long. (Thorax black, the pronotal collar above, scutellum, metanotum and tegulae, lemon-yellow; tergites 2-5 chiefly lemon-yellow, pygidium ferruginous.) *placida Arn.*
- (121) 122. Median area of the clypeus as long as wide in front, or a little longer.
- (130) 123. Triangular area of the epinotum without a median groove, or with only the trace of one in the apical angle.
- (127) 124. Median area of the clypeus a little longer than wide in front.
- (126) 125. Petiole cylindrical, longer than wide. *grata Arn.*
- (125) 126. Petiole as wide as long. *discrepans Brauns*
- (124) 127. Median area of the clypeus as wide in front as long.
- (129) 128. Face and clypeus white. *Osiris Arn.*
- (128) 129. Face and clypeus yellow. *nobilitata Cam.*
- (123) 130. Triangular area of the epinotum distinctly grooved down the middle.
- (132) 131. Abdomen mainly yellow, the base of the first two segments black, of the third to fifth reddish, the pygidium reddish. Thorax richly marked with yellow, the sides of the epinotum with large yellow spots. *africanula Brauns*
- (131) 132. Abdomen mainly black; sides of the epinotum without yellow spots.
- (134) 133. Mesonotum shining and sparsely punctured, with two longitudinal ridges margining the concave middle third of the segment. *Horus Arn.*
- (133) 134. Mesonotum dull, without longitudinal ridges.
- (136) 135. Median area of the clypeus longer than wide in front, the anterior margin crenulate. Petiole about as long as wide. *pictifacies Brauns*
- (135) 136. Anterior margin of the clypeus not crenulate.
- (140) 137. Clypeus shining, sparsely punctured, without a fine fundamental sculpture.
- (139) 138. Femora ferruginous; 10.5 mm. long. *holconotula Brauns*
- (138) 139. Femora blackish brown; 8 mm. long. *spinicaudata Cam.*
- (137) 140. Clypeus dull, with a fine fundamental puncturation and also a larger and sparse puncturation.
- (142) 141. Petiole clearly wider than long. *varicineta Cam.*
- (141) 142. Petiole a little longer than wide.
- (144) 143. Pronotal collar with a yellow tubercle on each side; pygidium black. *holconota Cam.*
- (143) 144. Pronotal collar without tubercles; pygidium ferruginous or fusco-ferruginous.
- (146) 145. Tegulae ferruginous. Puncturation of the mesonotum fairly coarse and close. *jackal Brauns*
- (145) 146. Tegulae whitish in front, brown behind. Puncturation of the mesonotum rather sparse, irregular and not deep. *hypocritica Brauns*

- J. The anterior half of the median area of the clypeus is crescentic and deeply excavated.
- (148) 147. Large species, 20–23 mm. long. The median area of the clypeus is not separated at the sides from the lateral sclerites. *multipicta* Smith
- (147) 148. Small species, 8 mm. long. The median area of the clypeus is distinctly separated from the lateral sclerites. *Nephtys* Arn.
- K. Median area of the clypeus with an ill-defined median carina which does not reach the base and ends below in a small tubercle a little distance from the anterior margin.
- (150) 149. Large and stout species, 20 mm. long. Petiole much wider than long. The anterior margin of the median area of the clypeus with a triangular tooth on each side, the area about as long as wide. (Ferruginous, the mesonotum, abdominal segments 3–6 and apical half of the second, black.) *Beguerti* Brauns
- (149) 150. Slender species, 11 mm. long. Petiole nearly twice as long as wide. Median area of the clypeus half as long again as wide in front, concave on each side of the median carinula, the anterior margin with a large and blunt tooth on each side. (Black, with yellow markings.) *albo-lineatus* Cam.
- L. Median area of the clypeus much wider than long and flat, somewhat like that of Section F but the anterior part is not inflected and there is no median carina. *ugandensis* Arn.

KEY TO THE ♂♂

- (2) 1. Pronotal collar with a large cone on each shoulder. Scutellum saddle-shaped, metanotum high, compressed from front to back. *bicuspidata* Arn.
- (1) 2. Pronotal collar without cones, scutellum and metanotum normal.
- (4) 3. Third to sixth sternites covered with a dense fulvous or brownish yellow pilosity which obscures the underlying sculpture. (Shining and sparsely punctured, the abdomen mainly lemon-yellow.) *Turneri* Arn.
- (3) 4. Sternites if pilose not densely so, the sculpture plainly visible.
- (10) 5. Petiole long, at least half as long again as wide.
- (7) 6. Petiole two and a third times longer than wide. (Triangular area of the epinotum smooth and shining, grooved down the middle. Thorax and first two tergites with yellow markings.) *albo-lineatus* Cam.
- (6) 7. Petiole between one-half and three-quarters longer than wide.
- (9) 8. Triangular area of the epinotum smooth and shining, grooved down the middle; clypeus entirely black, petiole red. *Isis* Arn.
- (8) 9. Triangular area of the epinotum with a few longitudinal rugae; clypeus marked with yellow, petiole black. *nigrifrons* Smith
- (5) 10. Petiole if longer than wide not more than one-third longer.
- (26) 11. Triangular area of the epinotum punctured.
- (13) 12. Triangular area of the epinotum sparsely punctured; petiole barrel-shaped, as long as wide. Length 6 mm. *discrepans* Brauns
- (12) 13. Triangular area of the epinotum closely punctured or reticulate-punctate, at least at the sides; petiole trapezoidal. Length at least 12 mm.
- (15) 14. Last joint of the flagellum strongly curved, compressed from above to below (see Brauns, Plate XLI, fig. 12). *Schultzei* Bischoff
- (14) 15. Last joint of the flagellum differently formed.

- (19) 16. Metatarsus of the hind legs not dilated near the apex.
- (18) 17. The three penultimate joints of the flagellum not flattened or excavated below, the apical joint transversely truncate; face with three vertical yellow lines which extend over to the clypeus; wings fuscous.
vigilans Smith, race *pervigilans* Turner
- (17) 18. The three penultimate joints of the flagellum are flattened below, the apical joint obliquely truncate; clypeus and lower part of the face, excepting a line on each side of the frontal carina, yellow; wings hyaline, clouded at the apex.
bulawayoensis Brauns
- (16) 19. Metatarsus of the hind legs more or less dilated over the apical half; apical joint of the flagellum longer than the penultimate, the last four joints more or less excavated below.
- (21) 20. Apical joint of the flagellum strongly uncinata, the apical part abruptly narrowed to a sharp point.
uncifera Arn.
- (20) 21. Apical joint of the flagellum curved, but not hooked.
- (25) 22. Apical joint of the flagellum gradually narrowed towards the apex.
- (24) 23. Thorax, excepting the pronotal collar, black; apical joint of the flagellum roundly truncate at the apex (see Brauns, Plate XLII, fig. 7).
africana Cam.
- (23) 24. Thorax with yellow markings on the pronotum, scutellum, meta- and epinotum; apical joint of the flagellum bluntly pointed at the apex.
africana, race *Kalaharica* Bischoff
- (22) 25. Apical joint of the flagellum broadened towards the apex, which is black and truncate (see Brauns, Plate XLII, fig. 9).
natalensis Sauss.
- (11) 26. Triangular area of the epinotum not punctured.
- (72) 27. Triangular area of the epinotum striate or rugose.
- (67) 28. Triangular area of the epinotum obliquely striate or rugose.
- (30) 29. The frontal triangle has a bluntly conical projection below the frontal carina (apical joint of the flagellum obliquely truncate, the three preceding joints slightly dilated at the middle on the outer margin).
eburneofasciata Brauns
- (29) 30. Frontal triangle not conically produced.
- (36) 31. Petiole evidently wider than long, at least half as wide again as long, more or less reversed cup-shaped.
- (33) 32. Posterior tibiae considerably attenuated towards the base, near which they are abruptly curved inwards (black, thorax and abdomen with large yellow markings, clypeus flattened in front, apical joint of the flagellum truncate).
nugax Arn.
- (32) 33. Posterior tibiae normal.
- (35) 34. Median area of the clypeus convex, with three small teeth on the anterior margin; mesosternum smooth and impunctate; sculpture not coarse, the mesonotum reticulate-rugose.
diodonta Schlett.
- (34) 35. Median area of the clypeus convex at the base, flattened in front, the anterior margin without distinct teeth; mesosternum reticulate-rugose; sculpture very coarse, the mesonotum reticulate-rugose and deeply punctured.
pictiventris Gerst
- (31) 36. Petiole a little longer than wide, or about as long as wide, if wider than long, then only very little so.
- (42) 37. Mesonotum longitudinally rugose, and punctured between the rugae.
- (39) 38. Anterior margin of the clypeus transverse, very indistinctly tridentate (abdomen black, with yellow bands, the pygidium and apical half of the sixth segment, ferruginous).
erythroura Cam.
- (38) 39. Anterior margin of the median area of the clypeus very distinctly tridentate, the teeth close together.

- (41) 40. Abdomen yellow, the base of the segments narrowly reddish yellow, the apex narrowly black; thorax richly variegated with yellow. *oraniensis* Brauns
- (40) 41. Ferruginous, the third, the apical half of the sixth and nearly the whole of the seventh tergite, pale yellow. *Arnoldi* Brauns
- (37) 42. Mesonotum punctured, or reticulate-punctate, without very evident longitudinal rugosity.
- (44) 43. Mesonotum shining, sparsely and coarsely punctured; tergites with very large, deep and fairly close punctures (petiole barrel-shaped, barely longer than wide). *macololo* Brauns, race *capensis* Arn.
- (43) 44. Mesonotum closely punctured, not shining, the puncturation of the tergites not very coarse.
- (48) 45. The apical angles of the sixth sternite produced into a tooth, clearly visible from the side.
- (47) 46. Teeth of the sixth sternite blunt; pygidial area transverse at the apex, the sides moderately convex. *orangiae* Brauns
- (46) 47. Teeth of the sixth sternite acute; pygidial area with the apical margin feebly concave, the sides parallel. *Schoutedeni* Brauns
- (45) 48. Apical angles of the sixth sternites not produced into teeth.
- (50) 49. Median area of the clypeus with a transverse, fuscous and impressed line a little behind the apex. *Kobrowi* Brauns
- (49) 50. Clypeus not impressed behind the apex.
- (54) 51. Petiole black.
- (53) 52. Clypeus black, the median area ferruginous at the apex; tegulae ferruginous. *vumbui* Arn.
- (52) 53. Clypeus yellow; tegulae pale yellow. *latifrons* Bingham
- (51) 54. Petiole not entirely black.
- (58) 55. All the tibiae and tarsi, or at least the fore and middle pairs, pale yellow.
- (57) 56. Apical joint of the flagellum curved, broadly truncate, half as long again as the penultimate joint. *rhodesiae* Brauns
- (56) 57. Apical joint of the flagellum not curved and not truncate, barely longer than the penultimate joint. *sumptuosa* Arn.
- (55) 58. Tibiae and tarsi more or less ferruginous.
- (60) 59. Sides of the epinotum with a large ferruginous or fusco-ferruginous spot. *armaticeps* Cam.
- (59) 60. Epinotum entirely black.
- (62) 61. Pygidial area twice as long as wide. *rufiscutis* Cam.
- (61) 62. Pygidial area shorter.
- (64) 63. Pygidial area black. *Yungvei* Cam.
- (63) 64. Pygidial area not entirely black.
- (66) 65. Pronotal collar in the middle as long as, or a little longer than the second joint of the flagellum. *ruficauda* Cam.
- (65) 66. Pronotal collar in the middle shorter than the second joint of the flagellum. *ludibunda* Arn.
- (28) 67. Triangular area of the epinotum arcuately, transversely striate or irregularly and coarsely rugose.
- (69) 68. Triangular area of the epinotum irregularly and coarsely rugose. *illustris* Arn.
- (68) 69. Triangular area of the epinotum arcuately, transversely striate.
- (71) 70. Abdomen, excepting the petiole, ochreous yellow. *iniqua* Kohl
- (70) 71. Abdomen black, the second to sixth tergites with pale yellow bands. *mazimba* Brauns

- (27) 72. Triangular area of the epinotum smooth, occasionally feebly punctured, or with traces of striae in the basal angles, or with two longitudinal carinae in the middle.
- (74) 73. Very large species, 16–22 mm. long. Epinotum, including the triangular area, in greater part yellow. Wings flavo-hyaline, the apex strongly infuscated. *multipicta* Smith
- (73) 74. Smaller species, less than 16 mm. long, the epinotum never yellow.
- (76) 75. Metatarsus of the middle pair of legs strongly curved at the base. Sternites with a dense, erect and yellowish pubescence; 15 mm. long; abdomen almost entirely lemon-yellow. *curvitaris* Schlett.
- (75) 76. Metatarsus of the middle pair of legs normal. Sternites without a dense pubescence.
- (80) 77. Triangular area of the epinotum not grooved down the middle, or only very indistinctly.
- (79) 78. Puncturation exceedingly coarse; mesonotum with four longitudinal ridges, the spaces between them concave. *languida* Cam.
- (78) 79. Puncturation not very coarse, mesonotum without longitudinal ridges. *nobilitata* Cam.
- (77) 80. Triangular area of the epinotum with a distinct median groove or with two indistinct longitudinal carinae.
- (82) 81. Triangular area of the epinotum with two longitudinal rugae, and with traces of rugae at the sides; face and clypeus black. *nigrostoma* Brauns
- (81) 82. Triangular area of the epinotum grooved down the middle.
- (88) 83. Petiole at least one-third wider than long, reversed cup-shaped.
- (85) 84. Puncturation of the tergites coarse and deep; petiole ferruginous. *arrogans* Arn.
- (84) 85. Puncturation of the tergites not very coarse; petiole black, or black and yellow.
- (87) 86. Pygidial area yellow, the apex fuscous, trapezoidal, wider at the base than at the apex. *emeryana* Grib. var. *varilineata* Cam.
- (86) 87. Pygidial area black, ferruginous at the apex, rectangular. *gomphocarpi* Brauns
- (83) 88. Petiole as long as wide or longer.
- (92) 89. Epimerum of the mesopleurae produced into a subtriangular horizontal crest, which seen from above plainly projects beyond the outer margin of the tegulae.
- (91) 90. Tibiae yellow outwardly. Head, seen from in front, not much wider than high; clypeus yellow. *hypocritica* Brauns
- (90) 91. Tibiae ferruginous. Head, seen from in front, clearly wider than high; clypeus black. *mutabilis* Arn.
- (89) 92. Epimerum of the mesopleurae not, or only slightly, cristate.
- (94) 93. Petiole nearly half as long again as wide (frontal carina and basal part of the median area of the clypeus whitish yellow, the rest of the head black). *pictifacies* Brauns
- (93) 94. Petiole about as long as wide, at least not more than one-quarter longer than wide.
- (100) 95. Thorax, excluding the tegulae, entirely black.
- (97) 96. Median groove of the epinotum very shallow, not crenulate; mesonotum rather shining and not closely punctured; femora, excepting the extreme apex, deep black. *amatoria* Arn.
- (96) 97. Median groove of the epinotum fairly deep; mesonotum dull or at least closely punctured; femora not deep black.
- (99) 98. Clypeus black, excepting the anterior margin of the median area. *jackal* Brauns

- (98) 99. Median area of the clypeus, excepting the anterior margin, yellow.
varicincta Cam.
- (95) 100. Thorax with some yellow markings.
- (108) 101. Petiole red, sometimes with a black spot in the middle.
- (103) 102. Second joint of the flagellum one-third longer than the third joint;
apical third of the petiole narrower than the rest.
reginula Brauns
- (102) 103. Second joint of the flagellum barely longer than the third; petiole
as wide at the apex as at the base, the sides moderately convex.
- (105) 104. Pale markings on the face, clypeus and legs lemon-yellow.
discrepans, race perplexa Arn.
- (104) 105. Pale markings on the face, clypeus and legs ivory, white.
- (107) 106. Femora yellowish red; median groove of the epinotum shallow, the
lateral grooves indistinct except at the base. Osiris Arn.
- (106) 107. Femora pale brown; median and lateral grooves of the triangular
area of the epinotum deep. Horus Arn.
- (101) 108. Petiole black.
- (110) 109. The whole of the dorsal face of the pronotal collar, the scutellum
and metanotum, lemon-yellow. placida Arn.
- (109) 110. Pronotal collar with a yellow spot on the shoulders or entirely
black, scutellum black.
- (112) 111. Mesonotum excavated lengthwise in the middle.
holconota Cam.
- (111) 112. Mesonotum convex transversely and lengthwise, not excavated
down the middle.
- (114) 113. Clypeus black, the anterior half of its median area dirty yellow; the
triangular area of the epinotum is margined at the sides by a simple
line; pronotum black. macalanga Brauns
- (113) 114. Clypeus yellow or ivory-white; the triangular area of the epinotum
margined laterally by wide and crenulate grooves; pronotal collar
with yellow spots on the shoulders.
- (116) 115. Trochanters of the anterior pair of legs brown (face and clypeus
yellowish white). spinicaudata Cam.
- (115) 116. Trochanters of the anterior pair of legs ochreous or pale lemon-
yellow.
- (118) 117. Ninth to eleventh joints of the flagellum wider than long; first
tergite with a transverse yellow spot at the base and small ones at
the apical angles; the second with a yellow apical band narrowed
medially. holconotula Brauns
- (117) 118. Ninth to eleventh joints of the flagellum as wide as long; first
tergite, excepting the apical and lateral margins, and the whole of
the second tergite, yellow. africanula Brauns

CORRECTIONS AND ADDITIONS TO DR BRAUNS'S PAPER ON *CERCERIS**Ann. Trans. Mus.* XI, Part 4, 1926

It should be noted that in Dr Brauns's paper the separation of the species into groups, according to the structure of the clypeus, is not carried on to the end. His last category, p. 317 "species with 4 teeth on the apical margin" applies only to *C. Barnardi* and not to the species which follow it.

C. vigilans Smith, race *pervigilans* Turner (*Trans. Ent. Soc. London*, p. 744-1912).

- C. fongosi* Brauns (*loc. cit.* p. 272) and *C. trilineata* Bischoff (*Jena. Denkschr.* xvii, p. 116. 1913) both sink as synonyms to Turner's subspecies.
- C. natalensis* Sauss. (*Reise d. Novara. Zool.* II, p. 96, ♀. 1867). To this species *morosula* Brauns (*loc. cit.* p. 280) sinks as a synonym.
- C. kalaharica* Bischoff (*loc. cit.* p. 118). The race *karooensis* Brauns of *C. africana* Cam. is a synonym.
- C. Schultzei* Bischoff (*loc. cit.* p. 116): *transvaalicola* Brauns is a synonym.
- C. Severini* Kohl. The ♂ described under this name by Brauns (p. 290) is much more likely to be the ♂ of *proteles* Brauns.
- C. lichtenburgensis* Brauns (*loc. cit.* p. 291). This cannot be considered as more than a variety of *ruficauda* Cam. having ferruginous colour on a part of the first and second, and the fourth and fifth abdominal segments, and slight colour differences on the head. Brauns gives the length as 10–12 mm., but the type and another specimen in his collection do not exceed 9 mm.
- C. macololo* Brauns (*loc. cit.* pp. 295–6). By analogy with the ♂ of the race *capensis*, described farther on in these pages, the ♂ described by Brauns must belong to some other species.
- C. emeryana* Grib. (*Mem. Acad. Sc. Bologna*, iv, p. 129, ♀. 1894). To this species *C. varilineata* Cam. must be assigned as a variety. I have not seen Gribodo's type, but his description is quite clear, and the structure of the pygidium is alone sufficient to justify this correction. The type of the species is from the Magnarra River, Mosambique, and differs from the variety in having the black on the head replaced by reddish orange.
- C. eulalia* Brauns (*loc. cit.* p. 316). This must be considered a race of the very variable *C. rufiscutis* Cam. described farther on.
- C. iniqua* Kohl (*Ann. K.K.N.H. Mus. Wien*, ix, p. 288. 1894): *cratocephala* Cam. and the colour varieties *deceptrix* and *libitina* Brauns (*loc. cit.* p. 333) are only colour varieties of Kohl's species, from which they differ by the absence of yellowish white markings on the scutellum and postscutellum.
- C. fingo* Brauns. This species was figured on Plate XLIII, but the description was omitted from the text.

♀. 9 mm. long. Black. A narrow streak margining the middle third of the inner orbits, the anterior half of the tegulae, a very thin transverse line on each side of the postscutellum and an apical band, dilated laterally, on the third tergite, pale yellow. On the fifth tergite there is a narrow band of brownish yellow on the apical margin. Apical third of the mandibles brown, the basal two-thirds of the same, the antennae and the legs, very pale ferruginous; the upper side of all the tibiae yellow. Wings slightly tinged with fuscous, the apex darker.

Face and clypeus dull, shallowly and not closely punctured, vertex and temples strongly reticulate-punctate. Mesopleurae reticulate-punctate, coarsely so on the lower half. Triangular area of the epinotum smooth and shining, with a few indistinct striae in the basal angles, grooved down the middle. The rest of the thorax above and the first five tergites are strongly punctured but not so closely as on the vertex.

The tumid portions of sternites 2–5 are shining, shallowly, sparsely and coarsely punctured. Pygidial area oval, the apex broadly truncate; the surface is dull, coriaceous and feebly rugulose. Mandibles with a very small tooth in the middle of the inner margin. Eyes slightly divergent below. Median area of the clypeus a little wider than long, feebly convex transversely, recurved in

front, the pre-apical margin deeply and arcuately emarginate, its anterior angles rounded and extending as far as the transverse apical margin. Posterior ocelli separated from the eyes by a distance equal to the length of the second and third joints of the flagellum. Mesopleurae unarmed. Petiole about as long as wide, widest in the middle, the sides moderately convex.

Willowmore, C.P. 1 ♀. Type in coll. Brauns.

C. holconotula Brauns.

This is another species which was figured (Plate XLIV, fig. 13) but not described in the text.

♀. 10.5 mm. long. Black. Clypeus and lower part of the face cream-white. The anterior margin of the brown tegulae, a line interrupted in the middle on the metanotum and a spot on each side of the middle near the base of the second tergite, cream-white. An apical band, widely dilated laterally, on the third tergite, a narrow band on the fourth and a median apical spot on the fifth tergite, dirty yellow. The tumid portion of the third sternite is also of that colour. The extreme apical margins of the petiole and of the second sternite are ferruginous. Antennae ferruginous below, fusco-ferruginous above. Mandibles ochreous at the base, brown at the apex. The extreme anterior margin of the median area of the clypeus is black. Legs ferruginous, the upper side of the tibiae cream-white. Wings hyaline, faintly clouded, the apex and radial cell of the forewing darker. Clypeus and lower face shallowly, finely and sparsely punctured, the clypeus fairly shining. Upper part of the face, as far as the posterior ocelli, dull, closely striate and punctured between the striae. Vertex shining, coarsely and rather irregularly punctured, the temples closely punctured. Pronotal collar dull and closely punctured on the anterior face, which is distinctly marginate at the sides, the dorsal face is tumid at the shoulders and less closely punctured. Mesonotum and scutellum moderately shining, very sparsely and strongly punctured at the sides, the scutellum also with a few punctures on the disc. Metanotum impunctate, smooth and shining like the triangular area of the epinotum, which has a shallow median longitudinal groove. Mesopleurae coarsely reticulate-punctate, the epinotum and petiole with a large but not close puncturation. Tergites 2-5 fairly strongly punctured, the punctures smaller than the spaces between them. Second sternite with a smooth raised platform at the base. Pygidial area dull, coriaceous and punctate, the punctures largest at the base, narrowly elliptical, twice as wide at the base as at the apex, which is rounded. Median area of the clypeus as long as wide in front, feebly convex, slightly depressed over the anterior third, the anterior margin straight and bluntly angular at the sides. Eyes slightly divergent below. Antennae inserted half as far again from the anterior ocellus as from the base of the clypeus. Mandibles with two small teeth on the basal half of the inner margin. Frontal carina acute. Posterior ocelli separated from the eyes by a distance equal to the length of the second and third joints of the flagellum. Petiole subquadrangular, the sides feebly convex, a little wider than long.

♂. 9 mm. long. Black. The following parts are pale lemon-yellow: clypeus and face up to the level of the top of the frontal carina, a spot on each side of the pronotal collar, the tegulae, disc of the metanotum, a broad transverse macula at the base and a streak on each side of the second tergite, apical bands dilated laterally on the third to sixth tergites, the tumid part of the third sternite, a spot on each side of the fourth sternite, and the legs. Anterior and middle femora above, the posterior femora above and below and the posterior tibiae on the inside of the apical half are more or less fuscous. Antennae fuscous

above, brownish yellow below, the scapes lemon-yellow. Punctuation, except on the sternites, relatively coarser and less close than in the ♀. Median area of the clypeus convex, two-thirds longer than wide, the anterior margin feebly convex and angular at the corners. Inner orbits parallel. Petiole a little longer than wide, parallel-sided. Pygidial area longer than wide, the sides feebly convex, the apex transverse, strongly punctured except near the apex.

Algoa Bay. Types in coll. Brauns.

Closely related to *spinicaudata* Cam. from which it differs by little more than size and details of colour.

C. macalanga Brauns.

♂ (hitherto undescribed). 9 mm. long. Anterior half of the median area of the clypeus pale yellow, enclosing a brown spot. The yellow on the sides of the face is reduced to a spot opposite the antennal sockets. Pronotal collar entirely black. Fifth tergite with a thin yellow line occupying the middle third of the apical margin, the sixth almost entirely pale yellow. The punctuation on the head and thorax is much less close than in the ♀, the spaces between the punctures on the vertex, mesonotum and epinotum being about twice as wide as one of the punctures. The triangular area of the epinotum is smooth and shining, without the striae which are present in the basal angles in the ♀. Inner orbits slightly divergent above and below. Median area of the clypeus fairly flat, oval, about half as long again as wide, the apical margin feebly tridentate. Second joint of the flagellum half as long again as the third. Petiole wider than in the ♀, as wide as long, as long as the second tergite, the sides moderately convex, widest behind the middle and convex above, not nearly flat as in the ♀.

Bulawayo, February, 1 ♂ (R. H. R. Stevenson). Type in coll. Stevenson.

C. Arnoldi Brauns.

♂ (hitherto undescribed). 9 mm. long. Median area of the clypeus yellow, the lateral areas ferruginous. The sides of the face narrowly, the frontal carina and the posterior margin of the pronotal collar except in the middle, yellow. The second tergite is ferruginous excepting a thin streak of yellow on the angles of the apical margin. The third tergite except the middle of the base, maculae on the second and third sternites, apical half of the sixth tergite and the seventh excepting the apex, yellow. There is also a thin line of yellow on the apical margin of the fifth tergite. Triangular area of the epinotum strongly and transversely rugose. Otherwise like the ♀ in colour and sculpture. Inner orbits parallel. Median area of the clypeus oval, widest at the upper third, nearly half as long again as wide, the apical margin with three blunt teeth. Second joint of the flagellum one-fourth longer than the third, the apical joint slightly curved, obliquely truncate and nearly twice as long as wide at the base. Posterior ocelli separated from the eyes by a distance equal to the length of the first two joints of the flagellum. Petiole as long as wide, as long as the second tergite, its sides feebly convex. Second tergite twice as wide as long. Pygidial area fairly strongly punctured, twice as long as wide, the sides feebly convex, the apical margin slightly concave.

Bulawayo, November, 1 ♂ (R. H. R. Stevenson). Type in coll. Stevenson.

C. discrepans Brauns.

♂ (hitherto undescribed). 7.5 mm. long. The petiole is infuscated in the middle, the second tergite is ferruginous only at the extreme base and the sixth tergite has an apical band of dirty yellow. Sternites black, the third with

a yellow spot on each side. The metanotum is pale yellow and the legs are slightly darker, otherwise like the ♀ in colour. The puncturation of the head and thorax is closer, stronger and more even than in the ♀, and the triangular area of the epinotum is clearly defined and sparsely punctured. Inner orbits parallel. Median area of the clypeus moderately convex, oval, one-fifth longer than wide, the anterior margin with three indistinct teeth. Pygidial area slightly widened towards the apex, which is transverse.

Willowmore, C.P. Type in coll. Brauns.

C. hypocritica Brauns (*loc. cit.* p. 316).

The words "anterior margin" on the seventh line from the top of the page should be altered to "median part of the clypeus." A variety of this species has been taken by Mr R. Turner at Okahandja, S.W. Africa which differs by its larger size, 10 mm. long, and by the bright chrome-yellow colour of the bands on the third and fifth tergites.

British Museum coll. 7 ♀♀.

C. pictifacies Brauns.

♂ (hitherto undescribed). 7.5 mm. long. Tergites 3 and 6 with yellow bands. Fore and middle tibiae and tarsi, apex of the middle femora, apical third of the hind tibiae, pale yellow. The yellow on the frontal carina is sometimes continued over the whole or a part of the median area of the clypeus. Otherwise like the ♀ in colour. The sculpture is similar, but somewhat coarser and closer. Median area of the clypeus half as long again as wide, widest above the middle, nearly flat, the anterior margin feebly tridentate. Petiole long, nearly one and a half times longer than wide, three-quarters as long as the second tergite, parallel-sided. The second tergite is a little wider than long, nearly hemispherical. Pygidial area a little wider at the apex than at the base. The ♀ is sometimes as much as 9 mm. long. This species belongs to the *migrifrons* group, in which the petiole in the ♂ is much longer than in the ♀.

Bulawayo and Sawmills S.R.; Dondo, Port. E. Africa.

NEW SPECIES AND VARIETIES AND KNOWN SPECIES

OMITTED FROM DR BRAUNS'S PAPER

C. ruficauda Cam., race *barbara* n.r.

♀. 8 mm. long. This differs from the variety *lichtenburgensis* as follows. Median area of the clypeus ferruginous. Frontal carina yellow, all the rest of the head black. Petiole without a yellow spot, fourth tergite with a very narrow yellow apical band, the fifth with a line of yellow in the middle of the apical margin. Middle and hind legs darker, the femora almost black above. The puncturation of the epinotum is closer, and the triangular area is not sharply and obliquely striate, but dull, finely and rather irregularly rugose. The lamina on the median area of the clypeus is broader and the pre-apical margin is obtusely angularly emarginate and not transverse.

Mogorr River, British East Africa, May, 1 ♀ (A. O. Luckman). Type in the British Museum.

C. macololo Brauns, race *capensis* n.r. (figs. 2 and 2a).

♀. 8 mm. long. The colour pattern is as in the type of the species but the yellow is distinctly paler, almost cream-white, and the dark parts of the legs are also paler, brown instead of black. The puncturation of the head and thorax is shallower and much sparser. On the epinotum the punctures are for

the greater part separated by spaces two or three times their own diameter, whereas in the type of the species the spaces are mostly not much wider than the punctures. The whole of the upper surface of the insect is distinctly shining, even more so than in the type of the species. The median area of the clypeus is raised from the base to near the apex and the pre-apical margin is medially excised, with a rounded tooth on each side. The teeth are somewhat smaller and the median excision somewhat shallower than in the type of the species. (The latter has two tubercles on the anterior margin, not four as stated in Brauns's description.)

♂. 7.5 mm. long. Clypeus, lower face to a little beyond the antennal sockets, frontal triangle and carina and a spot on the apex of the scapes, pale yellow. Antennae black above, brown below. Basal half or more of the posterior femora yellow. Puncturation of tergites 1-5 much coarser and deeper than in the ♀, the spaces between the punctures barely half as wide as the punctures. The whole body shining as in the ♀. Otherwise like the ♀ in colour and sculpture. Median area of the clypeus almost hexagonal, as long as wide, the anterior margin with three small black teeth. Pygidial area semi-elliptical, widest at the apex, which is transverse. Otherwise like the ♀.

Aliwal North, C.P., December, 2 ♀♀, 2 ♂♂ (R. E. Turner). Types in the British Museum.

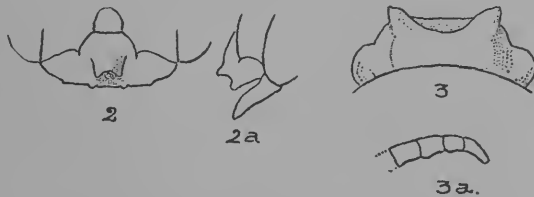


Fig. 2. *Cerceris macololo*, race *capensis* ♀ clypeus; a, lateral view.

Fig. 3. *Cerceris bicuspidata* ♂, pronotum from above; a, apical joints of the flagellum.

C. nobilitata Cam., race *sordidula* n.r.

♀. 9 mm. long. Differs in colour from the type of the species in having the red colour on the abdomen and legs replaced by black. In addition, the fourth tergite has a very narrow apical band of yellow, and the fifth tergite has small yellow spots at the sides as well as in the middle. The sternites 2-5 have apical bands of pale yellow, widely interrupted in the middle. The tibiae and underside of the fore and middle femora, the upper side of the hind femora and all the coxae and trochanters below are yellowish white. Tarsi dirty ochreous. On the thorax a spot on each side of the pronotal collar, the outer half of the tegulae and the disc of the metanotum are yellowish white. The epinotum is less shining and much more closely punctured at the sides. The face, clypeus and base of the mandibles are paler, or yellowish white. The petiole is distinctly wider than long (about as long as wide in the type of the species), and the pygidial area is longer and narrower.

Ceres, C.P., 2 ♀♀ (R. E. Turner). Type in the British Museum.

C. discrepans Brauns, race *perplexa* n.r.

♂. 7.5 mm. long. This differs from the type of the species by the pale markings being a more pronounced yellow, and by the legs, in which the brownish markings are replaced by black. The median area of the clypeus is more convex and the triangular area of the epinotum is obliquely striate

laterally at the base and has a crenulate median groove but no punctures. The pygidial area is longer, and wider at the base than at the apex.

Okahandja, S.W. Africa, November, 4 ♂♂ (R. E. Turner). Type in the British Museum.

C. varicincta Cam., race *manicana* n.r.

♀. 10.5-11 mm. long. Differs from the type of the species in colour as follows. Pronotal collar, tegulae, sides and apical third of the petiole, first and third tergites, basal half of the fifth and the whole of the sixth segment, ferruginous. The yellow bands on the third and fifth tergites are narrower, occupying not more than half of the segments. The fore and middle femora and tibiae outwardly, the posterior femora inwardly and the hind tibiae excepting a narrow whitish streak above, fuscous or fusco-ferruginous. Hind tarsi pale fuscous. Wings hyaline, only the apex and radial cell faintly clouded. The dorsal surface of the thorax is duller than in *varicincta* i.sp., and the epinotal triangle is also dull, with a scattered and very fine puncturation. The petiole is more slender, barrel-shaped, a little longer than wide (as long as wide in the type of the species), and three-quarters the length of the second tergite.

♂. 9 mm. long. Black, including the upper surface of the petiole. Face and clypeus as in the type of the species ♂. Sides and apical margin of the second and fifth tergites, the apical half of the sixth and the whole of the seventh segment, ferruginous. Sometimes there is a yellow spot in the middle of the red area of the sixth, and there is a yellow band on the third. The fuscous markings on the legs are darker, almost black. Triangular area of the epinotum dull and punctured as in the ♀. Petiole nearly one-third longer than wide, parallel-sided (distinctly convex at the sides in the type of the species).

Vumbu Mts, Umtali, S.R., February, 5 ♀♀, 2 ♂♂ (G. Arnold). Types in the Rhodesia Museum.

C. bicuspidata n.sp. (figs. 3 and 3a).

♂. 13 mm. long. Black. A transverse streak behind the ocellar area, a large spot on the upper part of the temples, the conical protuberances on the pronotal collar and a very small spot on each side of the petiole, fusco-ferruginous. Antennae fusco-ferruginous above, paler below, especially the scape, the second and last joints of the flagellum. Fore and middle tarsi, fore tibiae and femora below and at the apex, middle femora at the base and apex, and the middle and hind trochanters, ferruginous. Mandibles ferruginous. Clypeus, sides of the face up to the level of the antennal sockets, frontal carina, a narrow transverse bar on the middle of the second tergite and the basal half of the third tergite, lemon-yellow.

Wings fuscous, with a violaceous tint, the radial cell and apex of the fore wing darker than the rest. Clypeus and face dull, the rest of the body moderately shining between the punctures. Clypeus and the yellow parts of the face shallowly and fairly sparsely punctured, covered with a short whitish pubescence, the fimbriae on the lateral sclerites pale brown. Upper part of the face strongly punctate and rugose, the temples and vertex coarsely reticulate-punctate except behind the ocellar area where the puncturation is sparse and more distinct. Pronotum transversely rugose in front, rugulose and punctured at the sides, sparsely and finely punctured on the dorsal face. The latter has on each side a stout conical protuberance which is slightly compressed from front to back. Mesonotum very coarsely longitudinally rugose and deeply punctured between the rugae; anteriorly it is very clearly excavated in the middle with the margins of the excavation high. Mesopleurae with a

small tubercle and coarsely reticulate-punctate. Scutellum prominent, shining, with a few deep and large punctures, strongly impressed lengthwise in the middle. Metanotum very high, forming a transverse ridge rounded above and deeply impressed in the middle. Triangular area of the epinotum shining, transversely costate, the rest of the epinotum transversely rugose and deeply punctured between the rugae. Tergites closely and coarsely punctured, the punctures largest on the third and fourth, shallow on the sixth. Pygidial area parallel-sided, about twice as long as wide, shallowly and not closely punctured, the apical margin convex. Sternites 2-4 shallowly and coarsely punctured, closely so at the sides, the fifth and sixth almost impunctate except at the sides, the seventh semi-circularly excised. Median area of the clypeus one-third longer than wide, convex on the basal half, with a median pit some distance from the feebly tridentate anterior margin. Inner orbits almost parallel. Interocular distance on the vertex equal to a little more than the length of the first four joints of the flagellum. The latter is long, the second joint is three times longer than wide at the apex and about one-fourth longer than the third, the apical joint curved, truncate at the apex where it is narrowest, the three preceding joints somewhat swollen below. Petiole longer than wide, widest a little before the apex, the sides feebly convex. Second tergite about one-third wider than long, twice as wide at the apex as at the base. The radial cell of the forewing extends far beyond the third cubital cell. A species distinctly characterised by the structure of the pronotum, scutellum and metanotum.

Okahandja, S.W. Africa, November, 2 ♂♂ (R. E. Turner). Type in the British Museum. The paratype measures only 11 mm. long.

C. ludibunda n.sp.

♂. 8.5-9.5 mm. long. Black. Clypeus, sides of the face up to the level of the antennal sockets, frontal carina and triangle, yellow. The black between the latter and the sides of the face extends sometimes over the clypeus almost to its anterior margin. A transverse spot near the apex of the petiole, an apical band dilated laterally on the third tergite and the sixth tergite except at the sides and base, yellow. Very thin bands of the same colour, sometimes broken up into spots, may be present on the apical margins of the second and fifth tergites. Basal half of the third sternite yellow. Mandibles except at the apex, basal half of the antennae, tegulae, legs, apical margin of the tumid part of the second sternite and the pygidium at the sides and apex, ferruginous. Anterior tibiae on the inside, and the posterior trochanters underneath, more or less yellowish. Wings hyaline, infuscated at the apex and on the radial and first cubital cells. Clypeus, lower half of the face and the sternites shallowly and rather sparsely punctured, the rest of the body fairly closely punctured, almost reticulate-punctate except on the pygidial area and on the triangular area of the epinotum. The latter has a median longitudinal groove and is obliquely striate. Inner orbits almost parallel. Median area of the clypeus convex, widest a little above the middle, one-fifth longer than wide, with a small tooth on each side of the anterior transverse margin. The distance between the posterior ocelli and the eyes is equal to the length of the first two joints of the flagellum. The second joint is slightly longer than the third and the apical joint is moderately curved, obliquely truncate and a little longer than wide at the base. Petiole about as long as wide, the sides distinctly convex. First tergite two and a half times wider near the apex than at the base, and about one-quarter wider than long.

Harrissmith, O.F.S., February, 3 ♂♂ (R. E. Turner). Type in the British Museum.

C. uncifera n.sp. (figs. 4, 4a and b).

♂. 14 mm. long. Black. The following parts are bright lemon-yellow; clypeus and face excepting a black line margining the frontal triangle and posterior margin of the median area of the clypeus, a clavate spot widest above on the temples and adjacent to the outer orbits, the pronotal collar above, tegulae, mesosternum and lower part of the mesopleurae in front, two large oval marks on the scutellum, a transverse bar on the metanotum, the greater part of the sides of the epinotum, a large quadrangular spot, attenuated in front, on each side of the petiole, transverse spots on each side of the second to sixth tergites (confluent medially on the fourth to sixth), the petiole below, apical bands on the tumid parts of the second and third sternites and a very narrow line on the third. Scapes yellow below; the flagellum ferruginous below, brownish above. Legs lemon-yellow, the fore and middle coxae, trochanters and femora and the apical two-thirds of the hind femora, piceous. The apical half of the hind femora below, the hind tibiae except at the base and the hind metatarsi, pale ferruginous. The fore and middle tarsi reddish yellow. Wings hyaline, the fore wing clouded at the apex beyond the cells.

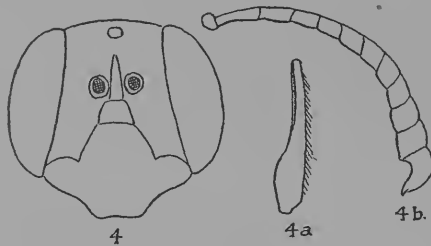


Fig. 4. *Cerceris uncifera* ♂ head; a, hind metatarsus; b, flagellum.

The whole body, excepting the clypeus, face, metapleurae and sides of the epinotum, is fairly densely covered with a long, rather coarse and yellowish pilosity, and the metatarsi of the hind legs are fringed on the outside with long hairs of the same colour. Face and clypeus almost smooth and slightly shining, finely and sparsely punctured. Vertex, temples and thorax dull, closely punctured, reticulate-punctate on the mesonotum, mesopleurae and epinotum. Metapleurae coarsely and transversely rugose above, rugulose below. The triangular area of the epinotum is not clearly defined, the usual lateral grooves being absent, and there is also no longitudinal sulcus down the middle of the declivity. Tergites 2-5 finely and closely punctured except on the yellow parts which are sparsely and very coarsely punctured; the sixth is sparsely punctured all over and slightly shining. Pygidial area subtriangular, longer than wide at the base, rounded at the apex and shallowly sparsely punctured. Second sternite shining, shallowly and sparsely punctured, the third to sixth shining, closely and finely punctured at the base and sides. The seventh sternite is not emarginate at the apex. Eyes strongly divergent below. Median area of the clypeus slightly convex, widest across the middle, a little longer than wide, moderately produced in front, the anterior margin straight. Vertex narrow, the interocular distance there being equal to the length of the first four joints of the flagellum. Posterior ocelli separated from the eyes by a distance equal to the length of the third joint of the flagellum. Frontal carina

not very acute. Antennae long and gradually thickened towards the apex, the second joint fully half as long again as the third, the eleventh wider than long, the apical joint uncinata, its extreme apex narrowed to a sharp point. Pronotal collar not depressed in the middle, about as long as the third joint of the flagellum. The metatarsus of the fore legs is long and curved, of the middle legs dilated near the base and twisted, and of the hind leg abruptly dilated at the apical third. Abdomen long and narrow, the segments barely constricted at the base. The petiole is distinctly longer than wide, fully as long as the second tergite and slightly wider at the apex than at the base.

Lanwa, N. Nigeria, May, 1 ♂ (J. W. Scott-Macfie). Type in the British Museum.

This species is easily recognised by the long and abundant pilosity, the shape of the antennae and metatarsi and by the narrow abdomen, which resembles that of the males of some species of *Myzine*.

C. mutabilis n.sp. (fig. 5).

♂. 8-11 mm. long. Black. The lower half of the face, frontal triangle and median area of the clypeus, pale yellow. The median area of the clypeus may be entirely black, or the yellow colour may be reduced to a spot of variable

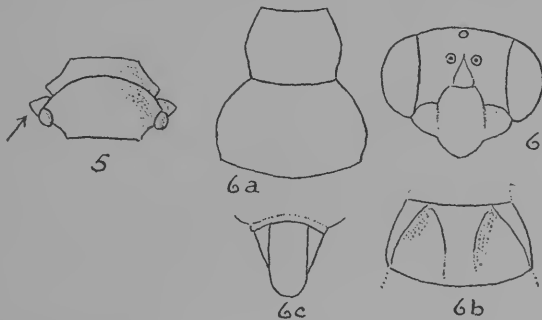


Fig. 5. *Cercheris mutabilis* ♂, pro- and mesonotum, showing epimeral crest.

Fig. 6. *Cercheris illustris* ♀, head; a, first two tergites; b, second sternite; c, pygidium.

size. The outer half of the tegulae, a narrow streak interrupted in the middle on the metanotum and apical bands, more or less dilated laterally, on the third to sixth tergites, pale yellow. The band on the third is usually the widest, but sometimes that on the sixth covers almost the whole of the segment. A band on the third sternite and the sides of the fourth are also pale yellow. Legs ferruginous, the hind coxae, trochanters and femora black, the tibiae yellowish above, the hind pair also sometimes infuscated on the inside, the posterior tarsi pale fuscous. Wings hyaline, tinged with fuscous, the radial cell and apical margin darker. Antennae blackish or dark brown above, pale ferruginous below, the scapes and the first joint of the flagellum entirely black. Mandibles ferruginous, black at the base and apex. The petiole and extreme base of the second tergite are sometimes pale ferruginous. Face and clypeus closely and finely punctured. Triangular area of the epinotum smooth, grooved down the middle; the rest of the body above fairly strongly and closely punctured, almost reticulate-punctate, especially on the vertex and upper part of the face. Second sternite shining, sparsely and shallowly punctured, with a raised platform at the base, the other sternites very closely and finely punctured at the base, shallowly and more coarsely on the tumid parts, the apical sternite feebly emarginate. Clypeus and face with a short, sparse and whitish

pubescence, the lateral fimbriae golden. Face wide, the inner orbits parallel. Median area of the clypeus half as long again as wide, subovate, only slightly produced in front, and nearly flat. The mesopleurae, just below the tegulae, are produced into a horizontal subtriangular crest, clearly visible from above and having the appearance of a broad spine when viewed from in front. Petiole a little longer than wide, the sides straight, a little wider at the apex than at the base, shorter than the second tergite. The latter is widest at the posterior fourth, where it is nearly two and a half times wider than at the base. Pygidial area very coarsely punctured, slightly wider at the base than at the apex, the sides nearly straight.

Van Reenen, Natal, January, 5 ♂♂; Harrissmith, O.F.S., February, 1 ♂ (R. E. Turner). Type in the British Museum.

C. illustris n.sp. (figs. 6, 6a, b and c).

♀. 11.5 mm. long. Black. Clypeus, excepting the anterior margin of the median area, face up to a little beyond the level of the antennal sockets, frontal carina, a transverse spot on the shoulders of the pronotal collar, tegulae, a large spot on each side of the scutellum, the metanotum, an apical band narrowly interrupted in the middle and dilated at the sides on the petiole, the third, fourth and fifth tergites and a semi-circular spot on the sides of the second tergite, lemon-yellow. Femora and tibiae lemon-yellow, the femora spotted with black above, the hind tibiae black at the apex inwardly, the tarsi brownish yellow. Wings hyaline, the radial cell and the apex fuscous, the stigma ochreous. Scapes yellow, the flagellum ferruginous, darker above than below. Median area of the clypeus shining, sparsely and fairly strongly punctured, the lateral sclerites dull and microscopically punctured. Face dull, very finely punctured and with a few larger punctures superimposed. Thorax and tergites 2-5 dull, strongly reticulate-punctate, the reticulations very prominent on the meso- and epinotum. Metanotum and petiole less closely punctured than the other parts. Triangular area of the epinotum dull, irregularly and obliquely rugose at the base, transversely so at the apex. Pygidial area dull, strongly reticulate-rugose, parallel-sided, twice as long as wide, the apical margin very convex. Sternites moderately shining, microscopically rugulose on the basal halves, the apical halves slightly tumid, sparsely and finely punctured in the middle, more coarsely at the sides. The second sternite has on each side of the middle a low torus curved outwardly and nearly reaching the apical margin; the space between them and the lateral margins somewhat concave. The sixth sternite is very deeply excised, the lateral pieces forming long, curved and dentiform processes. Near the base of the segment there is a deep median pit. Inner orbits almost parallel. Median area of the clypeus oval, slightly concave lengthwise, one-third longer than wide, clearly produced in front beyond the lateral sclerites, the apical margin convex and slightly reflected. Interocular distance on the vertex fully equal to the length of the first six joints of the flagellum. Posterior ocelli separated from the eyes by a distance equal to the length of the first two joints of the flagellum. The second joint of the flagellum is nearly half as long again as the third. Mesopleurae unarmed. Petiole subtrapezoidal, widest at about the middle, one-third wider than long, and three-quarters as long as the second tergite. The latter is much longer than wide at the base and at its widest about three-quarters wider than at the base. Posterior tibiae with seven serrations on the upper margin.

♂. 11 mm. long. Scapes yellow, the second to sixth and the apical joints of the flagellum ferruginous, the first and remaining joints black. Sixth tergite with a yellow apical band like the preceding tergites. Inner side of the hind

femora black. The curved tori on the second sternite are more distinct than in the ♀. The pygidial area is twice as long as wide, slightly narrowed at the base, feebly convex at the apical margin. Otherwise like the ♀ in colour and sculpture. Interocular distance on the vertex as in the ♀. Second joint of the flagellum half as long again as the third, the apical joint simple. Median area of the clypeus a little longer than wide, fairly convex, with a deep transverse groove behind the apical margin which is feebly tridentate.

Penkridge, Umtali, S.R., December-February, 2 ♀♀, 6 ♂♂ (R. H. R. Stevenson). Types in coll. Stevenson.

C. erynnis n.sp. (figs. 7, 7a, b and c).

♀. 13 mm. long. Black. A spot at the base of the mandibles, the clypeus, lower face as far as the insertion of the antennae, a small spot on the temples, a longitudinal streak on each side of the epinotal declivity, the sides of the petiole and the second tergite, a very thin apical band on the third and fifth tergites, the first and second sternites and a spot on each side of the third sternite, cream-white. Antennae pale ferruginous below, dark brown above. Legs ferruginous, darker above, the middle and hind coxae and trochanters, the underside of the hind femora and a narrow streak on the underside of the

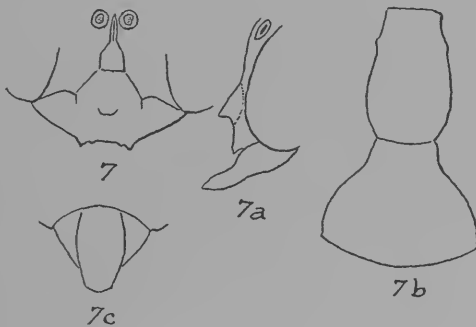


Fig. 7. *Cerckeris erynnis* ♀, clypeus; a, clypeus; b, first two tergites; c, pygidium.

hind tibiae, cream-white. Pygidial area fusco-ferruginous. Wings fuscous, with a violaceous tint. Clypeus and face dull, clothed with short silvery pubescence, the face sparsely punctured, the clypeus microscopically and closely so, except the median area below the lamina which is smooth and shining. Vertex moderately shining, very strongly and closely punctured, with indistinct transverse rugae between the punctures. Temples and pronotal collar dull, more finely and less closely punctured, the anterior face of the collar and the sides of the pronotum transversely rugulose. Mesonotum and scutellum strongly longitudinally rugose and deeply punctured between the rugae, somewhat shining. Metanotum shining, with a few small punctures. Mesopleurae unarmed, coarsely reticulate-punctate. Metapleurae strongly rugose above, the lower half very finely rugulose. Epinotum closely and coarsely punctured, almost reticulate-punctate, fairly shining. Triangular area of the epinotum smooth and shining, with a very thin and shallow median groove. Petiole above and the apical two-thirds of the second and third tergites with very large punctures. The punctures on the fourth tergite are as large as, but scantier than on the preceding tergites, those on the fifth small and shallow. Pygidial area closely and finely punctured and dull on the basal half, which is separated from the rugose apical portion by a slightly shining and smooth area.

It is subovate, widest near the base, about one-half longer than wide, the apical margin straight, the apical angles rounded. The sides of the pygidium are very coarsely punctured. Sternites shining, sparsely and finely punctured and rugulose, the tumid parts with a few large punctures at the sides. Median area of the clypeus a little longer than wide, its basal half convex transversely and raised, ending in a very short lamina, below which it is moderately concave; the anterior margin transverse, bluntly dentate on each side. Inner orbits distinctly divergent below. Interocular distance on the vertex equal to the length of the first four joints of the flagellum. The flagellum is fairly long and slender; the second joint is three times longer than wide at the apex and one-fourth longer than the third. Temples, seen from the side, narrower than the eyes. Petiole widest at the posterior third, the sides slightly convex, three-quarters longer than wide and fully as long as the second tergite; the latter is fully two and a half times wider near the apex than at the base. Posterior tibiae with only four serrations on the upper margin.

Mlanje, Nyasaland, February, 2 ♀♀ (S. A. Neave). Type in the British Museum.

C. monticola n.sp. (figs. 8 and 8a).

♀. 10 mm. long. Black. An irregular and thin line on the sides of the face up to the level of the antennal sockets, the frontal carina, lateral apical streaks on the second tergite, a complete apical band dilated laterally on the third tergite and a transverse streak covering the middle third of the apical margin of the fifth tergite, fore and middle tibiae below and the tarsi, pale yellow. The hind tibiae straw-yellow, the joints infuscated at the apex. Wings hyaline, the radial cell and apex infuscated. Clypeus and face with a very fine fundamental puncturation on which is superimposed a larger, shallow and sparse one. Elsewhere the puncturation is fairly close and strong, except on the tumid areas of the sternites which are shallowly and sparsely punctured. Metapleurae closely transversely striate; the triangular area of the epinotum finely and irregularly rugose. Head very broad, wider than the thorax. Inner orbits feebly divergent below. Median area of the clypeus convex, raised towards the apical margin, the raised portion forming a pentagonal area; the apical margin is straight and the pre-apical margin slightly concave. Interocular distance on the vertex equal to the length of the first eight joints of the flagellum. Pronotal collar not impressed in the middle, about as long as the first two joints of the flagellum. Petiole widest at the posterior third, about one-third longer than wide, shorter than the second tergite which is nearly three times wider at its widest than at the base. Pygidial area sub-elliptical. Posterior tibiae with six serrations on the upper margin.

Mlanje, Nyasaland, March, 1 ♀ (S. A. Neave). Type in the British Museum.

C. sumptuosa n.sp. (fig. 9).

♀. 8-10 mm. long. Black. The femora excepting the apex of the fore and middle pairs, the first two abdominal segments and basal half of the third sternite, ferruginous. Sometimes the third tergite is also ferruginous. Clypeus, face at the sides, frontal carina, a spot on each side of the pronotal collar, the greater part of the tegulae, the metanotum, apical bands, widely dilated laterally, on the third to fifth tergites, pale yellow. The band on the fourth is often much reduced or obsolete. Tibiae and tarsi lemon-yellow, the latter becoming darker or ochreous towards the apex. Flagellum ferruginous, darker above, the upper side of the scapes and the second joint, and the whole

of the first joint, blackish. Wings hyaline, the forewing fuscous only at the apex. Face and clypeus dull, closely and finely punctured. Scutellum shining, coarsely and sparsely punctured. Metanotum smooth and shining, the triangular area of the epinotum shining, sharply and obliquely striate. The rest of the body, excepting the sternites and pygidial area, strongly and closely punctured, the mesopleurae and epinotum reticulate-punctate. The pronotal collar has a depressed and feebly striate area behind. Pygidial area broadly ovate, dull, as wide at the base as at the apex, closely and finely rugose. Second sternite shining, shallowly punctured, bluntly carinate lengthwise medially. Inner orbits parallel. Median area of the clypeus feebly convex, as long as wide, inflected for a short distance in front, the apical margin straight, the pre-apical margin angularly emarginate and ending on each side in a wide and angular lobe. Posterior ocelli separated from the eyes by a distance equal to the length of the second and third joints of the flagellum. Interocular distance on the vertex equal to the length of the first eight joints of the flagellum. Petiole very convex at the sides, nearly one-third wider than long, about two-thirds as long as the second tergite. The latter is twice as wide as long, and at its widest two and a half times wider than at the base. Posterior tibiae with six serrations on the upper margin.

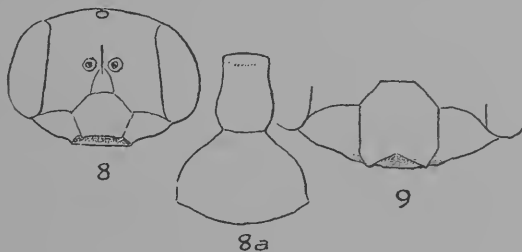


Fig. 8. *Cerckeris monticola* ♀ clypeus; a, first two tergites.
Fig. 9. *Cerckeris sumptuosa* ♀, clypeus.

♂. 9–10 mm. long. The colour in this sex is very variable. It is like that of the ♀ but with the apical half of the second tergite black, or varies as follows:

Form A. Second tergite black, tergites 3–6 with yellow apical bands which may be more or less reduced on the fourth and fifth, third sternite with a small yellow spot on each side.

Form B. First and second abdominal segments ferruginous, the second tergite blackish medially on the apical half and with a broad pale yellow spot at the base, tergites 3–6 with wide pale yellow apical bands which are narrowly attenuated in the middle on the third and fifth and widely so on the fourth, that of the sixth covering the whole surface except at the extreme base; the third to sixth sternites with yellow spots at the sides. Pygidial area fusco-ferruginous at the apex, but sometimes entirely black. In nearly all specimens the femora are more or less black at the base, and the posterior femora are sometimes black all over except at the apex. Inner orbits parallel. Median area of the clypeus octagonal, one-third longer than wide, the anterior margin feebly tridentate. Petiole less broad than in the ♀, widest at about the posterior third, one-fifth wider there than long. The carina on the second sternite is much more distinct than in the ♀. Pygidial area elongate rectangular, nearly twice as long as wide, closely and coarsely punctured. Otherwise like the ♀.

Port St John, Pondoland, December; Witzenberg Valley, S.W. Cape Prov.

and Harrissmith, O.F.S., February, 15 ♀♀, 8 ♂♂ (R. E. Turner). Types in the British Museum.

In one ♀ specimen from Port St John, all the ferruginous markings on the legs and abdomen are replaced by black. This species is closely related to *reginula* Brauns, but the latter is less robust, has a narrower petiole and longer and thinner antennae.

C. dejecta n.sp. (figs. 10, 10a, b and c).

♀. 10 mm. long. Black. Face as far as the antennal sockets but excepting a narrow border on each side of the frontal carina, clypeus excepting the anterior margin which is ferruginous in the middle and black at the sides, narrow bands interrupted in the middle on the pronotal collar and metanotum, a large spot on each side of the petiole and an apical band on the third tergite, pale yellow. Antennae fusco-ferruginous, the scape and first four joints of the flagellum paler. A spot on the temples, the tegulae and the pygidial area ferruginous. Fore tibiae and fore and middle femora ferruginous below, blackish above. Posterior femora, tibiae and tarsi piceous, the metatarsus of the middle pair of legs straw-yellow. The underside of the posterior coxae, trochanters and femora and the underside of the middle tibiae very pale yellow. Mandibles ferruginous, blackish at the apex.

Wings faintly fuscous, the apex and radial cell of the forewing dark fuscous. Clypeus and face dull, closely and finely punctured, and with a larger and shallow puncturation super-imposed. Vertex strongly punctured behind the ocelli, less strongly and with a trace of longitudinal rugae in front of them. Pronotum dull, fairly finely and closely punctured. Mesonotum and scutellum slightly shining, longitudinally rugose and shallowly punctured between the rugae. Metanotum smooth. Mesopleurae unarmed, coarsely reticulate-rugose and punctured. Epinotum coarsely reticulate-punctate, the triangular area strongly and obliquely striate. Petiole coarsely punctured, tergites 2-4 more closely than the petiole, the fifth much more finely and sparsely punctured. Pygidial area elliptical, slightly narrower at the base than at the rounded apex, dull, transversely rugose, punctured at the base. Head broad, the inner orbits divergent below. Median area of the clypeus wide, nearly half as wide again as long, deflected for a short distance in front and with a small median dentiform tubercle just above the deflected portion. Mandibles with two blunt teeth on the inner margin. Interocular distance on the vertex equal to the length of the first five joints of the flagellum plus half of the sixth. The joints of the flagellum rather long, all at least longer than wide, the second joint three and a half times longer than wide at the apex and two-thirds longer than the third joint. The distance between the posterior ocelli and the eyes is equal to the length of the second joint of the flagellum. Pronotal collar short, not impressed in the middle. Petiole a little wider than long, widest at about the middle, the sides convex, two-thirds as long as the second tergite. Abdomen rather narrow, the segments not much constricted at the base. Posterior tibiae with six serrations on the upper margin.

Makinda, Brit. E. Africa, 1 ♀ (T. J. Anderson). Type in the British Museum.

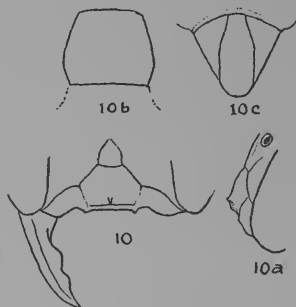


Fig. 10. *Cerceris dejecta* ♀, clypeus; a, clypeus; b, first tergite; c, pygidium.

C. arida n.sp. (figs. 11, 11a and b).

♀. 10 mm. long. Black; the abdomen pale ferruginous, the petiole with a pre-apical yellow band, the pygidial area fusco-ferruginous. Mandibles excepting the blackish apical third, clypeus excepting the anterior margin, sides of the face narrowly, frontal carina, a small spot on the upper part of the temples, a narrow line margining the outer orbits and the tegulae in front, pale yellow. Legs pale ferruginous. Antennae blackish above, fusco-ferruginous below. Wings fuscous, with a violaceous tint. Clypeus and face aciculate, dull, finely and sparsely punctured. The rest of the head closely punctured and also finely rugose lengthwise in front of the ocelli. Pronotum fairly finely and shallowly punctured. Mesonotum obliquely, the scutellum longitudinally rugose, with large shallow punctures between the rugae. Metanotum dull and finely punctured. Mesopleurae with a small indistinct tubercle, reticulate-rugose and punctured like the epinotum. Triangular area of the epinotum sharply and transversely striate and dull. Tergites 1-5 slightly shining, coarsely punctured, sparsely in the middle, more closely at the sides. Pygidial area finely reticulate-rugose, subtriangular, nearly twice as long as wide at the base, the apex rounded. Sternites finely and sparsely punctured,

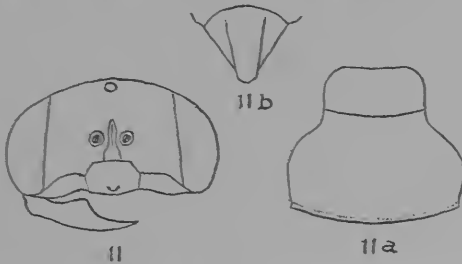


Fig. 11. *Cerckeris arida* ♀, head; a, first two tergites; b, pygidium.

the sixth arcuately emarginate. Head broad, the inner orbits divergent below. Clypeus very wide and short, the median area half as wide again as long, with a laminate, porrect and triangular tooth just behind the apical margin. The latter is deflected, transverse and ends on each side in a small tooth. Antennae inserted much nearer to the base of the clypeus than to the ocelli. Second joint of the flagellum three times longer than wide at the apex and half as long again as the third joint. Interocular distance on the vertex equal to the length of the first six joints of the flagellum. The posterior ocelli are separated from the eyes by a distance equal to the length of the second joint of the flagellum plus half of the first. Pronotal collar short, about as long as the first joint of the flagellum, not depressed in the middle. Petiole broad, twice as wide as long and about half as long as the second tergite; the latter is two-thirds wider than long. Posterior tibiae with six serrations on the upper margin.

Zungeru, N. Nigeria, 1 ♀ (J. J. Simpson). Type in the British Museum.

C. placita n.sp. (figs. 12, 12a, b and c).

♀. 9 mm. long. Ferruginous. The following parts are black; vertex and face from the ocellar area to the antennal sockets, pronotum excepting the shoulders which are yellow, meso- and meta-pleurae, triangular area of the epinotum, apical half of the second tergite and the extreme base and apical margins of tergites 3-5. The anterior half of the lateral sclerites of the clypeus blackish, the median area ferruginous on the deflected portion, yellow on the

basal. Sides of the face widely, frontal carina, a small spot on the temples, metanotum, a large spot on each side of the petiole, nearly the whole of the third tergite excepting a median triangular and ferruginous area, and apical bands, attenuated medially, on the fourth and fifth tergites, yellow. Legs and antennae ferruginous, the flagellum towards the apex and the posterior tibiae on their apical third somewhat darker. Wings hyaline, the radial cell and apex of the forewing infuscated. Sculpture similar to that of *C. arida* Arn. but somewhat less coarse, the metanotum smooth and shining and with a few fine punctures. The triangular area of the epinotum is shining, sharply transversely striate and grooved down the middle. Pygidial area elliptical, fully twice as long as wide, reticulate-rugose, the apex rounded. Mesopleurae with a very small and indistinct tubercle. Clypeus wide and short, about one-third of the median area and of the inner parts of the lateral sclerites is deflected anteriorly; on the median area there is a trace of a longitudinal carina which reaches the posterior margin of the deflected portion and projects as a very slight tubercle. Mandibles with an angular tooth on the inner margin beyond the middle. Inner orbits slightly divergent below, almost parallel. Frontal carina not acute. Seen from the side, the temples at their widest are fully as wide as the eyes. Pronotal collar not impressed in the middle. Petiole about one-fifth wider than long, shorter than the second tergite. Posterior tibiae with six serrations on the upper margin.

Karungu, Victoria Nyanza, April, 1 ♀ (S. A. Neave). Type in the British Museum.

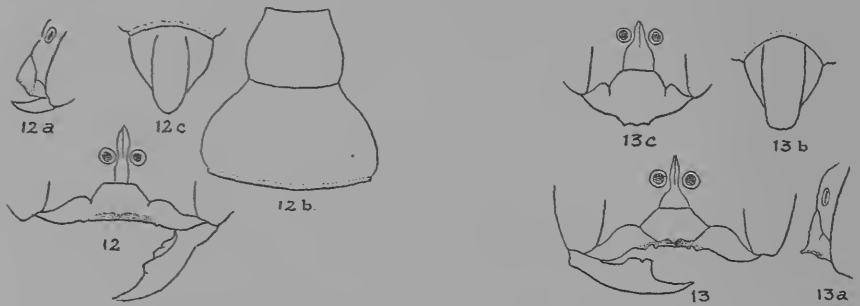


Fig. 12. *Cerceris placita* ♀, clypeus; a, clypeus; b, first two tergites; c, pygidium.
Fig. 13. *Cerceris arrogans* ♀, clypeus; a, clypeus; b, pygidium; c, ♂, clypeus.

C. arrogans n.sp. (figs. 13, 13 a, b and c).

♀. 10 mm. long. Black. Clypeus excepting the anterior margin, sides of the face up to the level of the antennal sockets, frontal carina, a spot on the temples above, dorsal face of the pronotal collar, tegulae in front, a spot on each side of the scutellum and the metanotum, very pale yellow. Petiole and base of the second tergite ferruginous; large transverse maculae on tergites 2-4 and a wide band, narrowed in the middle, on the fifth tergite, pale lemon-yellow. Sternites 1 and 2 reddish ochreous, the rest of the sternites brown, the apical margins of their tumid areas paler or brownish yellow. Anterior and middle femora brown, their apical halves and the tibiae and metatarsi pale yellow, the rest of the tarsal joints ochreous brown. Hind legs yellowish brown, the femora somewhat darker. Wings hyaline, infuscated at the apex. Antennae brown above, ferruginous below. Mandibles pale yellow at the base. Face and clypeus dull, microscopically and closely punctured, the face with some larger punctures on the yellow areas. The rest of the body moderately

shining. Puncturation of the vertex and temples not very close and not coarse, the mesonotum somewhat more strongly punctured, the scutellum shallowly and very sparsely punctured. Metanotum and the triangular area of the epinotum smooth and shining, the latter with a few oblique striae on the basal angles and a shallow median groove. Tergites 1-5 fairly coarsely but not closely punctured, especially in the middle at the base, the second tergite much more strongly punctured than the rest. Pygidial area subovate, fully twice as long as wide, the apex feebly convex, dull, closely and finely rugose, with a few punctures at the base. Sternites 1-4 shining, the second to fourth sparsely and shallowly punctured, the fifth and sixth dull, the fifth closely punctured. Mandibles with a large blunt tooth at the middle of the inner margin. Inner orbits divergent below. Clypeus wide and short, the median area almost twice as wide as long, produced just behind the slightly deflected anterior margin into a sharp, subnasiform protuberance. Frontal carina blunt. Petiole nearly half as wide again as long, two-thirds as long as the second tergite which is as wide at the apex as at the base. Posterior tibiae with six serrations on the upper margin. Mesopleurae with a small acute tubercle.

♂. 8 mm. long. Temples without a yellow spot. Thorax black, except the tegulae and a spot on the shoulders of the pronotal collar which are pale yellow. Abdomen with narrow yellow apical bands on the second and third tergites, the sixth almost entirely yellow. Femora, except at the apex, black, the rest of the legs pale yellow. Otherwise like the ♀ in colour. Puncturation of the thorax and abdomen very coarse and deep, like that of *C. languida* Cam. The mesonotum medially has a deep and wide longitudinal impression. Epinotum coarsely and very sparsely punctured, the triangular area smooth and shining, without striae in the basal angles, the median groove almost obsolete. Median area of the clypeus as wide as long (distinctly longer than wide in *languida* ♂), the anterior margin tridentate. Petiole as in the ♀ (in *languida* ♂ it is clearly longer than wide and cylindrical). Pygidial area wider at the base than at the apex (of equal width in *languida* ♂).

Okahandja, S.W. Africa, February, 1 ♀, 1 ♂ (R. E. Turner). Types in the British Museum.

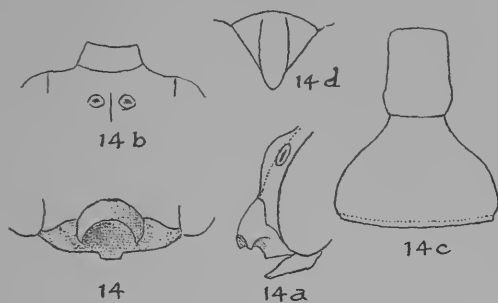


Fig. 14. *Cerckeris Nephthys* ♀, clypeus; a, clypeus; b, clypeus from above; c, first two tergites; d, pygidium.

C. Nephthys n.sp. (figs. 14, 14a, b, c and d).

♀. 9 mm. long. Black. Base of the mandibles, the projecting basal portion of the clypeus excepting its anterior margin, a small and indistinct spot on each side of the face below the level of the antennal sockets and an apical band, dilated laterally, on the third abdominal segment, pale yellow. Tegulae, base of the second tergite, the whole of the second sternite and the apical segment

ferruginous. Scape and first joint of the flagellum black, the rest of the flagellum dark brown above, pale ochreous below. Femora and tibiae fusco-ferruginous, the fore and middle tibiae below, the basal third of the hind femora and a streak on the outside at the apex, straw-yellow. Tarsi of the same colour, but the apices of the joints of the hind tarsi are fuscous. Wings hyaline, very slightly fuscous on the radial cell and at the apex of the forewing. Face and clypeus with silvery pubescence. Tergites with a fairly conspicuous greyish pubescence, intermixed with longer grey hairs on the fifth tergite. Pygidial area fringed with long brownish fimbriae. The puncturation on the vertex is close and shallow, on the mesonotum, scutellum and epinotum large, shallow and less close. Triangular area of the epinotum dull, with a few feebly striae in the basal angles and with a well-defined median groove. Petiole and tergites 2 and 3 fairly closely punctured, the fourth shallowly, sparsely and finely punctured on the apical half only. Pygidial area subovate, twice as long as wide, slightly wider at the base than at the apex, dull, sparsely and coarsely punctured at the base. Median area of the clypeus strongly protruding in its basal half, the protuberance very convex from side to side and free only in front; its anterior margin (pre-apical margin) seen from in front is almost semicircular. The space below the protuberance is concave, shining and produced in the middle of the apical margin into a short rectangular lobe. Frontal carina acute. Inner orbits parallel. Petiole subrectangular, not quite one and a half times as long as wide, the sides nearly parallel. It is not much shorter than the second tergite, which is nearly three times wider at its widest than at its base. Posterior tibiae with five serrations on the upper margin. Mesopleurae without a tubercle.

Okahandja, S.W. Africa, March, 1 ♀ (R. E. Turner). Type in the British Museum.

C. inconspicua n.sp. (figs. 15 and 15a).

♀. 9 mm. long. Black. Base of the mandibles, clypeus excepting the anterior margin, lower half of the face excepting a narrow border on each side of the frontal triangle, underside of the scapes, a spot on the shoulders of the pronotal collar, the tegulae in front, a small basal spot on each side of the second tergite, an apical band on the third tergite and sternite and another, which does not reach the lateral margins, on the fifth tergite, yellow. Second sternite black at the base, pale yellow in the middle and ferruginous at the apex. Coxae, trochanters and femora pale ferruginous, more or less yellow at the apex below. Fore and middle tibiae pale yellow, the tarsi straw-yellow, the posterior tibiae blackish, their outer margins straw-yellow. Wings hyaline, only the extreme apex slightly clouded. Closely and fairly strongly reticulate-punctate on the vertex and thorax, excepting the scutellum and metanotum where the puncturation is sparser. Triangular area of the epinotum smooth and shining, with some short longitudinal rugae at the base, the apex feebly rugulose, without a median groove. Second tergite shining, coarsely and not closely punctured. Pygidial area narrow, elliptical, dull, sparsely punctured at the base, two and a third times longer than wide. Inner orbits slightly divergent below. Median area of the clypeus feebly convex, widest in front, the anterior margin narrowly inflected, with two small teeth on each side. Just behind the inflected margin there are two small blackish tubercles in the middle. Pronotal collar with a narrow depressed area behind; the prosternum has on each side a V-shaped crest, so that viewed from the side it appears dentate. Petiole subglobose, widest at the posterior third, narrower at the base than at the apex, two-thirds as long as the second tergite. The latter is

three times wider at the apex than at the base. Second sternite with an indistinct platform at the base. Posterior tibiae with six serrations.

Chiromo, Nyasaland (R. C. Wood). Type in the British Museum.

C. Hamiltoni n.sp. (figs. 16, 16a and b).

♀. 10 mm. long. Closely related to *C. mazimba* Brauns. Black. Basal two-thirds of the mandibles, clypeus excepting the inflected part of the median area, sides of the face, frontal carina, a spot on the underside of the scapes, shoulders of the pronotal collar, tegulae, metanotum, a large spot, angular on the inside, on each side of the second tergite, apical bands dilated laterally on the third to fifth tergites, apices of the fore and middle femora, all the tibiae and the basal joints of the tarsi, very pale yellow. The colour is much paler than in *mazimba*, in which it is chrome-yellow. The last four joints of the tarsi ochreous. Wings hyaline, infuscated at the apex beyond the radial cell. Median area of the clypeus very sparsely and shallowly punctured, somewhat shining, elsewhere the sculpture is reticulate-punctate as in *mazimba* but much shallower, especially on the fifth tergite. The triangular area of the epinotum

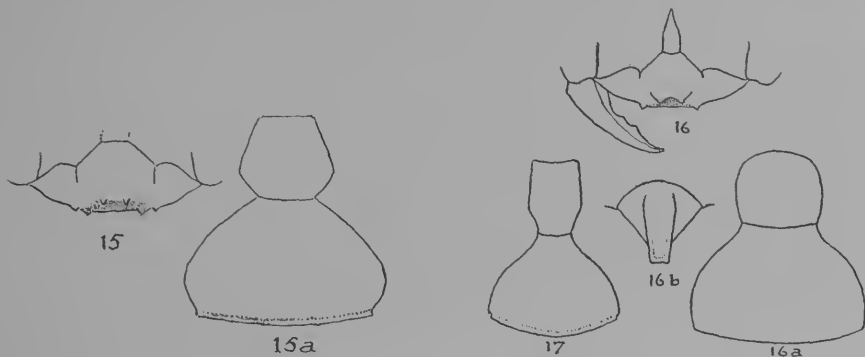


Fig. 15. *Cerceris inconspicua* ♀, clypeus; a, first two tergites.

Fig. 16. *Cerceris Hamiltoni* ♀, clypeus; a, first two tergites; b, pygidium.

Fig. 17. *Cerceris egena* ♀, first two tergites.

is strongly and longitudinally rugose, except over the apical third where the rugae are transverse. The clypeus is like that of *mazimba* but the median area is almost flat and the inflected part in front is shorter. The occiput is more developed than in *mazimba*, the temples being wider than the eyes when seen from the side. Petiole relatively shorter but of the same shape as in *mazimba*. Pygidial area elliptical, deeply punctured at the base, twice as long as wide, the apical margin transverse. Mesopleurae without tubercles. Posterior tibiae with six serrations on the outer margin (five in *mazimba*).

Magadi Junction, Brit. E. Africa, April, 2 ♀♀ (F. G. Hamilton); Mara River, Masai Reserve, February, 1 ♀ (A. O. Luckman). Type in the British Museum.

C. egena n.sp. (fig. 17).

♀. 8 mm. long. Black. An oblong spot on each side of the face below the level of the antennal sockets, the scapes below, a narrow apical band on the third tergite and a transverse spot in the middle of the apical margin of the fifth tergite, pale yellow. Mandibles, legs excepting the tarsi and the sixth abdominal segment, pale reddish brown. The fore and middle tibiae below and at the apex above, fore and middle tarsi and the hind metatarsi, straw-

yellow, the last four joints of the hind tarsi pale brown. Antennae dark brown above, ferruginous below. Wings hyaline, clouded at the apex. Face and clypeus finely and closely punctured and covered with dense greyish pubescence. Elsewhere closely and strongly punctured and dull, excepting the sternites which are shining and sparsely punctured. Triangular area of the epinotum smooth and shining, with a deep median groove. Mesopleurae armed with three sharp triangular teeth. Anterior coxae angularly produced in front. Pygidial area elliptical, about three-quarters longer than wide, dull, very finely coriaceous and rugose. Second sternite with a small basal platform. Anterior face of the pronotal collar marginate at the sides, the margin ending below in a sharp angle, so that seen from above the collar appears dentate below. Inner orbits parallel. Median area of the clypeus about as long as wide, nearly flat but with a slight depression at the anterior third, the apical margin convex and narrowly depressed. Petiole one-third longer than wide, narrower at the apex than at the base, the sides converging posteriorly from about the posterior third of their length. Second tergite about one-third longer than the petiole, three and a half times wider at its widest than at the base. Posterior tibiae with five serrations on the upper margin.

Mlanje, Nyasaland, March, 1 ♀ (S. A. Neave). Type in the British Museum.

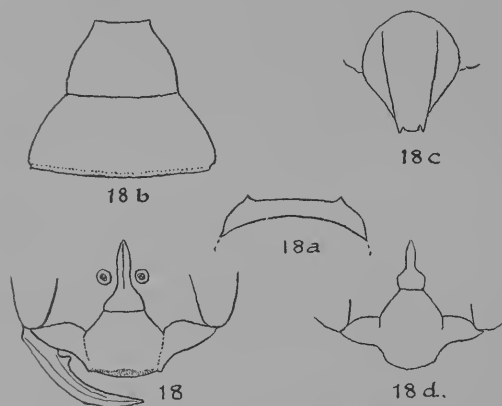


Fig. 18. *Cerckeris Turneri* ♀, clypeus; a, pronotum; b, first two tergites; c, pygidium; d, ♂, clypeus.

C. Turneri n.sp. (figs. 18, 18a, b, c and d).

♀. 13 mm. long. Lemon-yellow, the tergites chrome-yellow. Apex of the mandibles, underside of the head, a broad band behind the ocelli which curves back at the inner orbits and joins a narrower band on the occipital margin, sides of the pronotum, pro- and meso-sternum, mesonotum excepting a small spot at the anterior angles, mesopleurae posteriorly, the epinotal triangle and the middle third of the epinotal declivity, black. The extreme bases and the depressed apical margins of the first five tergites and a median triangular spot on the petiole are fusco-ferruginous. Pygidial area pale reddish ochreous. Flagellum ochreous below, reddish brown above. Legs lemon-yellow, the middle and hind femora and tibiae somewhat darker above. Face and clypeus dull, closely, shallowly and fairly finely punctured. Vertex moderately shining, strongly punctured, closely so at the sides and in front, sparsely and much more coarsely behind the ocelli. Temples dull, shallowly and sparsely punctured.

Mesopleurae fairly finely and not closely punctured, transversely rugose posteriorly, armed with a sharp tooth below. Metapleurae strongly and transversely striate. Epinotal triangle convex, smooth and shining, impunctate, deeply grooved down the middle, the sides and base not margined with crenulate grooves. The rest of the thorax is very shining, very sparsely, finely and irregularly punctured. Abdomen shining, sparsely and finely punctured. Pygidial area long, attenuated towards the base, dull, microscopically granulate, nearly two and a half times longer than wide at the base, the apical margin narrowly excised on each side so that the lateral angles form a small tooth. Dorsal face of the pronotal collar with a triangular prominence on each side in front. Inner orbits divergent below. Median area of the clypeus convex, a little wider than long, twice as wide in front as at the base, the fuscous anterior margin slightly depressed. Petiole trapezoidal, half as wide again as long and twice as wide at the apical margin as at the base. Second tergite as long as the petiole and about two and a half times wider than long. Posterior tibiae with nine serrations on the upper margin.

♂. 9–12 mm. long. The yellow colour of the face is variable in extent, sometimes reaching as far as, and encircling, the anterior ocellus. Vertex and temples black, except for an angulated yellow band margining the outer orbits. The whole of the dorsal face of the pronotal collar is yellow. The black margin of the base and apex of the tergites is wider than in the ♀. Pygidium yellow, the area shining, sparsely and coarsely punctured. Posterior femora and tibiae spotted with brown above. Otherwise like the ♀ in colour and sculpture, but in the smaller examples the puncturation of the mesonotum is coarse, and much closer than in the ♀. Mesopleurae unarmed. The tumid parts of the third to sixth sternites are covered, except on the lateral and apical margins, with a dense, erect and velvety pubescence which varies in colour from brownish grey to reddish brown. The pubescence is so dense as to hide the underlying sculpture. Apical angles of the tumid parts very prominent. The prominence on the shoulders of the pronotal collar is less distinct than in the ♀ and in the smaller specimens (9 mm.) is almost obsolete. Median area of the clypeus more or less octagonal, moderately convex, slightly produced in front, the anterior margin convex. Apical joint of the flagellum curved and obliquely truncate. The petiole is a little narrower than in the ♀. Pygidial area trapezoidal, the apex almost straight.

Okahandja, S.W. Africa, February–March, 2 ♀♀, 7 ♂♂ (R. E. Turner). Types in the British Museum. The dense velvety pubescence on the sternites distinguishes the ♂ of this species from all others in the Ethiopian region with the exception of *curvitaris* Schlett.

C. quadridentata n.sp. (figs. 19, 19a and b).

♀. 10–11 mm. long. Black. Mandibles excepting the apex, a diffuse spot on the temples, the lower half of the median area of the clypeus, tegulae, second and third tergites, all the sternites and the legs excepting the greater part of the coxae, ferruginous. Antennae ferruginous below, dark brown above. Wings hyaline, the apex of the forewing beyond the radial cell heavily and abruptly infuscated. Lateral sclerites of the clypeus and lower half of the face dull, microscopically and closely punctured, the face with a few larger punctures in addition. Median area of the clypeus, except at the base and sides, reticulate-punctate. Upper part of the face closely and shallowly rugoso-punctate, the vertex and temples shining and strongly punctured. Sides of the pronotum obliquely rugose. Mesopleurae coarsely and transversely rugose, with large punctures between the rugae. Metapleurae transversely costate.

Triangular area of the epinotum smooth and shining, feebly grooved down the middle but without crenulate grooves at the sides and base. Metanotum impunctate. The rest of the thorax is shining, coarsely and sparsely punctured. Tergites 1-5 shining, with a scattered puncturation composed of large and small punctures intermixed. Pygidial area dull, slightly rugulose over the apical third, more than twice as long as wide, the sides almost parallel, somewhat narrowed towards the apical margin which has four small and acute teeth. Sternites shining, sparsely and coarsely punctured at the sides of the tumid areas, which are very prominent at the apical angles. Inner orbits divergent below. Mandibles with two large teeth on the inner margin. Median area of

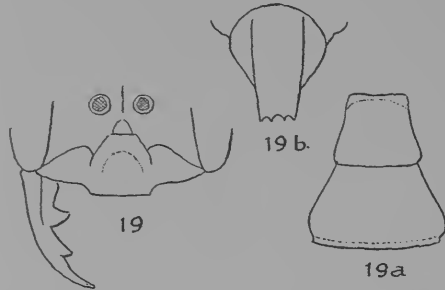


Fig. 19. *Cerceris quadridentata* ♀, clypeus; a, first two tergites; b, pygidium.

the clypeus as long as wide in front, flattened over a triangular area which covers the greater part of its surface in front, the anterior margin depressed and straight. Pronotal collar fairly long, the dorsal face as long as the first two joints of the flagellum, the declivous face marginate at the sides. Petiole trapezoidal, a little wider at the apex than long and nearly as long as the second tergite. The latter is three-quarters wider than long, and two-thirds wider near the apex than at the base. Posterior tibiae with eight serrations on the upper margin.

Okahandja, S.W. Africa, January, 4 ♀♀ (R. E. Turner). Type in the British Museum.

C. grata n.sp. (figs. 20, 20a and b).

♀. 8 mm. long. Black. Mandibles, excepting the extreme brown apex, clypeus, face up to the level of the antennal sockets, frontal carina, scapes, the very prominent bosses on the shoulders of the pronotal collar, tegulae excepting their inner margins, a band interrupted in the middle on the posterior half of the scutellum, the metanotum, a large transverse spot at the base of the second tergite and apical bands, widely dilated laterally, on the third to fifth tergites, yellowish white. The band on the third reaches to the base of the segment at the sides. An apical band on the third sternite and small spots at the posterior angles of the second, fourth and fifth sternites, yellowish white. Fore and middle femora on the basal half above and the hind femora except at the apex, black; the rest of the legs yellowish white. Flagellum brown above, ochreous below, the first joint blackish. Wings hyaline, slightly infuscated at the apex. Vertex and temples closely and strongly punctured, the mesopleurae reticulate-punctate, the metanotum finely and sparsely punctured. Triangular area of the epinotum smooth and shining, not impressed in the middle and without crenulate grooves at the sides and base. The rest of the head and thorax coarsely and sparsely punctured. Tergites 1-5 and the tumid parts of the sternites shining, sparsely and coarsely punctured, the petiole less coarsely

than the rest. Pygidial area ovate, dull, microscopically punctured. The second sternite with a distinct basal platform. Mesopleurae without tubercles. Mandibles with a small tooth near the base of the inner margin. Inner orbits feebly divergent below. Median area of the clypeus one-third longer than wide in front, somewhat flattened anteriorly, the apical margin transverse. Petiole barrel-shaped, as long as wide, about three-quarters as long as the second tergite. The latter is two and a half times wider near the apex than at the base and half as long again as wide at the base. Posterior tibiae with six serrations on the upper margin.

Okahandja, S.W. Africa, February, 1 ♀ (R. E. Turner). Type in the British Museum.

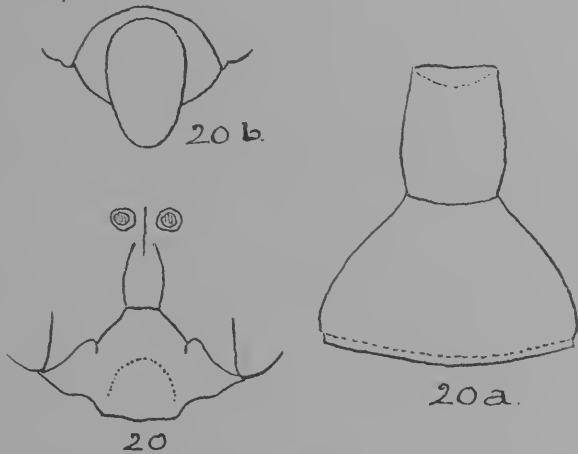


Fig. 20. *Cerceris grata* ♀, clypeus; a, first two tergites; b, pygidium.

C. placida n.sp. (figs. 21, 21 a, b and c).

♀. 9 mm. long. Black. The following parts are lemon-yellow: mandibles excepting the brown apex, scapes, clypeus, face and frontal carina, pronotal collar, tegulae, scutellum, mesonotum, the basal half and apical angles of the second tergite, the third and fifth tergites excepting the extreme base, an apical band dilated laterally on the fourth tergite, and the legs. Pygidium ferruginous. Sternites 1 and 2 ferruginous, the remaining sternites yellow on the tumid parts, ferruginous elsewhere. Flagellum ochreous below, pale reddish brown above. Wings hyaline, infuscated at the apex. Posterior femora and tibiae with a brown spot on the inside at the apex. Closely punctured, including the clypeus and face. The puncturation is fairly large, especially on the mesonotum, which is almost reticulate-punctate. Triangular area of the epinotum shining, shallowly grooved down the middle. Pygidial area dull, fairly strongly and irregularly rugose, barrel-shaped, two-thirds longer than wide in the middle, a little wider at the apex than at the base. Inner orbits nearly parallel. Median area of the clypeus nearly flat, one-third wider in front than long, with an obtuse-angled brownish lamina on each side just above the slightly inflected anterior margin. Pronotal collar as long as the second joint of the flagellum, not depressed in the middle, the shoulders rounded. Petiole a little wider than long, widest at the posterior third, three-fifths as long as the second tergite, which is more than half as long again as wide. Second sternite with a triangular basal platform. Mesopleurae without tubercles. Posterior

tibiae with six serrations on the upper margin. The anterior coxae are produced outwardly in front.

♂. 8 mm. long. Sixth tergite yellow except at the base, the pygidium fusco-ferruginous. Sternites black, with yellow apical bands on the second and third; otherwise coloured like the ♀ but the yellow bands on the tergites are narrower. Median area of the clypeus as long as wide, the apical margin convex and feebly tridentate. Petiole barrel-shaped, a little longer than wide, the second tergite very little longer than the petiole. Pygidial area coarsely punctured, trapezoidal, the apical margin slightly concave. Otherwise like the ♀.

Azare, Kano, N. Nigeria, September, 1 ♀, 1 ♂ (Dr A. Lloyd). Types in the British Museum.

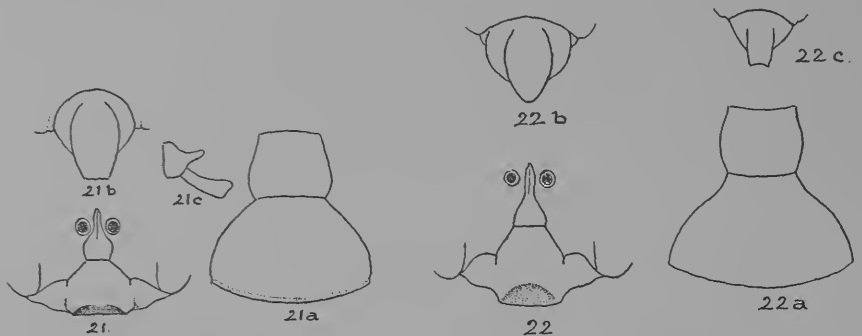


Fig. 21. *Cerckeris placida* ♀, clypeus; a, first two tergites; b, pygidium; c, anterior coxa and trochanter.

Fig. 22. *Cerckeris Osiris* ♀, clypeus; a, first two tergites; b, pygidium; c, ♂, pygidium.

C. Osiris n.sp. (figs. 22, 22a, b and c).

♀. 8 mm. long. Black. Clypeus and face to a little beyond the level of the antennal sockets, frontal triangle, a spot on each side of the pronotal collar, tegulae, a transverse bar at the base and a small spot at the apical angles of the second tergite, an apical band dilated laterally on the third tergite, an apical one narrowed at the sides on the fifth, and the tumid bases of the third to fifth sternites, ivory-white. Petiole ferruginous, pygidial area fusco-ferruginous. Femora ferruginous, the tibiae and tarsi yellowish white, the hind tibiae brown on the insides except at the base. Antennae brownish above, pale ferruginous below, the scapes yellow underneath. Wings hyaline, the apex barely clouded. Face and clypeus dull, fairly strongly but not closely punctured; above the antennal sockets as far as the ocelli the surface is finely aciculate between the punctures. Vertex and temples more strongly punctured than the face, the vertex somewhat shining. Mesopleurae reticulate-punctate, the metanotum and the triangular area of the epinotum smooth and shining, the latter not grooved down the middle. The rest of the thorax shining, coarsely and sparsely punctured. Petiole shallowly and sparsely punctured. Tergites 2-5 coarsely and closely punctured. Pygidial area dull, ovate, finely wrinkled, nearly twice as long as wide. The tumid parts of the sternites coarsely punctured. Inner orbits parallel. Median area of the clypeus convex, the anterior fourth concave, as long as wide, the apical margin straight. Petiole a little wider than long, the sides convex; second tergite three-quarters wider than long, about two-fifths longer than the petiole. Posterior tibiae with six serrations on the upper margin.

♂. 6-8 mm. long. Fifth tergite with a narrow band of yellow at the apex, covering only the middle third of its width. Sixth tergite yellow, narrowly black at the base and apex. Pygidium black. Otherwise like the ♀ in colour. The puncturation of the mesonotum is much coarser than in the ♀. Median area of the clypeus convex, as long as wide, narrowed in front, the anterior margin convex. Petiole cylindrical, a little longer than wide. Pygidial area very coarsely punctured, subovate, the apex narrowly truncate.

Okahandja, S.W. Africa, March, 2 ♀♀, 6 ♂♂ (R. E. Turner). Types in the British Museum.

C. amatoria n.sp. (figs. 23, 23 a, b and c).

♀. 11 mm. long. Coal black and shining. The following parts are pale yellow: clypeus excepting the anterior margin, frontal triangle and lower third of the face and a narrow line adjacent to the inner orbits to beyond the level of the antennal sockets, outer third of the tegulae, a narrow pre-apical band, interrupted in the middle, on the petiole, wider bands, also interrupted in the middle, on the third and fifth tergites, a spot on each side of the second and a very thin streak on the apical margin of the fourth tergite, anterior and middle tibiae and tarsi, a streak on the inside of the anterior femora and the

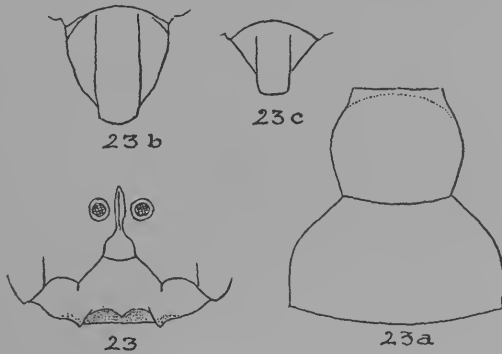


Fig. 23. *Cercheris amatoria* ♀, clypeus; a, first two tergites; b, pygidium; c, ♂, pygidium.

apical two-thirds on the outside of the hind tibiae. Hind tarsi blackish. Mandibles yellow, black at the apex. Wings fusco-hyaline, darker at the apex. The whole body, excepting the clypeus, face and mesopleurae is shining. Lower face and median area of the clypeus sparsely and finely punctured, the lateral areas very closely so. The puncturation of the vertex, temples and pronotal collar is strong and fairly close, except behind the ocellar area. Sides of the pronotum obliquely and sharply striate. Mesopleurae closely reticulate-punctate. Mesonotum, scutellum and epinotum sparsely and coarsely punctured, the spaces between the punctures on the middle of the mesonotum being about three or four times as wide as the punctures. Metanotum finely and sparsely punctured. Triangular area of the epinotum smooth and shining, convex, without a median groove. Tergites coarsely and fairly closely punctured, the punctures largest on the second. Sternites shallowly punctured at the sides. Pygidial area almost parallel-sided, rounded at the apex, two and a half times longer than wide, coarsely punctured over the basal half, wrinkled over the apical. Inner orbits parallel. Median area of the clypeus convex, wider than long, produced into a low angular tubercle in the middle just behind the inflected anterior margin; the latter is transverse. Posterior ocelli separated from the eyes by a distance which is slightly greater than the length

of the first two joints of the flagellum. Pronotal collar as long as the first two joints of the flagellum. Petiole one-third wider than long, the sides very convex. Second tergite very little longer than the petiole. Posterior tibiae with five serrations on the upper margin.

♂. 8 mm. long. The apical band of yellow on the fifth tergite very narrow, that of the sixth wide and covering the apical half of the segment. Otherwise like the ♀ in colour and sculpture. Median area of the clypeus convex, broadly oval, the anterior margin bluntly tridentate. Pygidial area almost quadrangular, the sides feebly convex, sparsely and coarsely punctured, nearly twice as long as wide, the apical margin transverse.

Bulawayo, December, 1 ♀ and 1 ♂, taken in *copula* (R. H. R. Stevenson). Types in coll. Stevenson.

C. ponderosa n.sp. (figs. 24, 24a and b).

♀. 9 mm. long. Black. Sides of the face, frontal carina and basal two-thirds of the clypeus, yellow; the anterior third and sides of the median area ferruginous. Pronotum, upper third of the mesopleurae, metapleurae, epinotum excepting the triangular area, base of the petiole, basal half of the fifth tergite and the whole of the sixth, the sternites and the femora, ferruginous. A small spot on the temples, a transverse spot on the pronotal collar, tegulae, an apical band greatly dilated laterally on the second tergite, a narrow band on the fourth and a wide one on the fifth, large triangular spots at the sides of the second to fourth sternites, pale yellow. Tibiae and tarsi yellowish white above, pale ferruginous below. Antennae ferruginous, darker above towards the apex. Wings hyaline, faintly tinged with fuscous, the radial cell and apex of the forewing darker. Triangular area of the epinotum smooth and shining, not grooved down the middle. The rest of the thorax, excepting the meso- and meta-pleurae, closely and strongly punctured, including the clypeus and face. Tergites closely and strongly punctured, the sternites shallowly and less closely. Pygidial area obovate, dull, finely and closely rugose, narrowed at the base, about twice as long as wide. Declivous face of the pronotal collar marginate at the sides, the margin ending below in a sharp tooth which is plainly visible from above. Mesopleurae with a very small tooth. Inner orbits parallel. Median area of the clypeus as long as wide, shallowly concave over its middle third, the apical margin excised in the middle. Petiole almost semicircular, almost twice as wide as long, two-thirds as long as the second tergite, which is also semicircular and twice as wide at the apex as long. Posterior tibiae with five serrations on the upper margin. Anterior coxae angularly produced outwardly in front.

Embu, Brit. E. Africa, November, 1 ♀ (J. Orde Browne). Type in the British Museum.

C. hausa n.sp. (figs. 25, 25a and b).

♀. 10 mm. long. Yellow. Vertex, temples below and on the hind margin, sides and neck of the pronotum, mesonotum, mesosternum, the margins of the mesopleurae, metapleurae, the lower margins of the sides of the epinotum, the triangular area of the same and a median line down the declivity, black. The base and apex of the first four tergites reddish brown, which on the first two are connected by a median line of the same colour. Only the base of the fifth tergite is reddish brown. Pygidial area dirty yellow, becoming brownish towards the apex. The base and depressed apical margin of all the sternites are pale reddish. Fore and middle tarsi, excepting the basal joint, ochreous; the hind tarsi pale ferruginous. Wings hyaline, clouded beyond the cells. Fairly

strongly punctured, reticulate-punctate on the vertex and tergites, the puncturation of the moderately shining mesonotum and scutellum shallower and less close. Median area of the clypeus shining, shallowly and sparsely punctured. Triangular area of the epinotum smooth and shining, grooved down the middle. Pygidial area dull, finely and irregularly punctured, ovate, the apex narrowly truncate. Inner orbits feebly divergent below. Median area of the clypeus moderately convex, slightly produced in front, about as long as wide

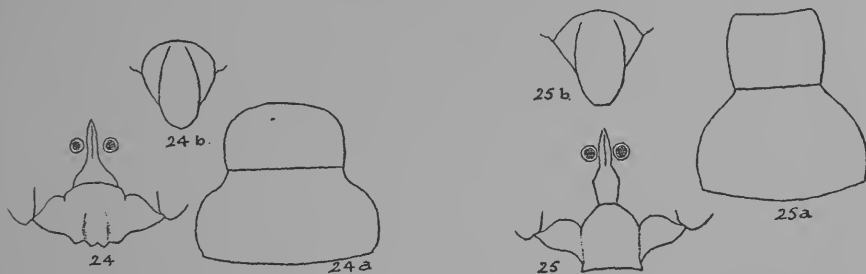


Fig. 24. *Cerceris ponderosa* ♀, clypeus; a, first two tergites; b, pygidium.

Fig. 25. *Cerceris hausa* ♀, clypeus; a, first two tergites; b, pygidium.

in front, the anterior angles subdentate. Second joint of the flagellum half as long again as the third. Pronotal collar rounded at the shoulders, slightly impressed medially. Mesopleurae with a small triangular tooth. Petiole one-third wider than long, the sides feebly convex, two-thirds as long as the second tergite. The latter is twice as wide at the middle as at the base and not much longer than wide at the base. Second sternite with a triangular basal platform. Posterior tibiae with seven serrations on the upper margin.

Azare, Kano, N. Nigeria, 2 ♀♀ (Dr A. Lloyd). Type in the British Museum.

C. uncta n.sp. (figs. 26, 26a and b).

♀. 12 mm. long. Shining, with an oily lustre. Mandibles excepting the black apex, clypeus, frontal carina and the sides of the face adjacent to it, antennae and two small spots behind the ocellar area, ferruginous. The upper part of the face as far as the ocelli and the top of the frontal carina yellow tinged with red; the temples pale ochreous, the vertex black. Thorax and

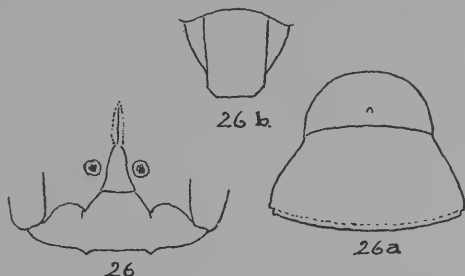


Fig. 26. *Cerceris uncta* ♀, clypeus; a, first two tergites; b, pygidium.

abdomen black, the following parts pale ochreous: pronotal collar above and the pronotal tubercles, lateral margins of the mesonotum, scutellum excepting a diffuse black line down the middle, metanotum, two maculae on the mesopleurae, the epinotum excepting the triangular area and a small margin outside it, the petiole except the black base and a narrow red line down the middle,

and bands on the second to fifth tergites occupying more than the apical half of the segments laterally and interrupted by a thin reddish line medially. Pygidium, sternites and the legs, pale ferruginous. Head fairly closely and shallowly punctured, the vertex more coarsely than the rest, the punctures fairly small on the face and clypeus. Dorsal face of the pronotal collar, mesonotum and scutellum sparsely and shallowly punctured. Metanotum smooth and shining. Sides of the pronotum obliquely striate, the mesopleurae transversely rugose and strongly punctured, armed with a small and acute tubercle. Epinotum closely and strongly punctured, the sides in front coarsely and transversely striate, the declivity finely and transversely so in the middle. The triangular area is smooth, shining, convex and grooved down the middle. Punctuation of the tergite 1-5 close and not large, of the sternites shallow and sparse. Pygidial area almost rectangular, the apical angles obliquely truncate, half as long again as wide, the basal two-thirds without distinct sculpture, the apical third sparsely rugose lengthwise, the apical margin straight. Mandibles with three small blunt teeth on the inner margin. Inner orbits slightly divergent below. Median area of the clypeus not distinctly delimited from the lateral sclerites, flat, the apical margin straight and with a small tooth on each side. The lateral sclerites have a short oblique impression at their inner upper angles. Frontal carina blunt. Antennal sockets twice as far from the anterior ocellus as from the clypeus. Posterior ocelli separated from the eyes by a distance equal to the length of the second and third joints of the flagellum. Anterior face of the pronotal collar sharply marginate at the sides, the dorsal face as long as the second joint of the flagellum. Anterior coxae produced outwardly in front. Petiole twice as wide at the apical margin as long, with a median fovea behind the apical margin. Second tergite twice as long as the petiole, half as wide again at the apex as at the base. Posterior tibiae with seven serrations on the upper margin.

Gambia, March, 1 ♀ (J. J. Simpson). Type in the British Museum.

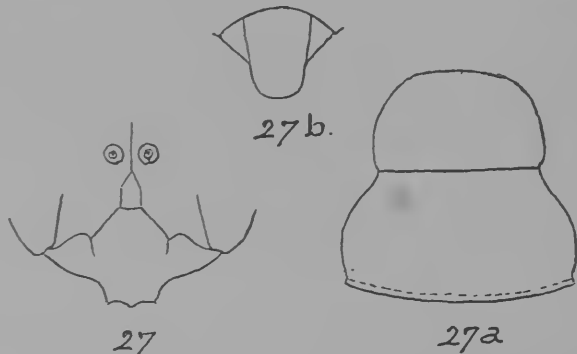


Fig. 27. *Cerckeris nugax* ♂, clypeus; a, first two tergites; b, pygidium.

C. nugax n.sp. (figs. 27, 27a and b).

♂. 11-14 mm. long. Black. The following parts are lemon-yellow: mandibles excepting the apex, clypeus, face, frontal carina and a triangular mark between it and the anterior ocellus, scapes, a line margining the posterior orbits and dilated above, dorsal face of the pronotal collar except a narrow line in the middle, pronotal tubercles, posterior half of the prosternum, tegulae, the greater part of the mesosternum and mesopleurae, scutellum and metanotum,

a large oval spot on each side of the epinotum, broad bands covering the apical two-thirds of the segments on the first six tergites, and the legs. The bands on the tergites are widely interrupted in the middle by a triangular extension of the basal black colour on the first two tergites, narrowly so on the others. The apical third or more of the hind femora and tibiae brown, the hind tarsi testaceous. Flagellum ochreous below, the first six joints ferruginous, the seventh to eleventh fusco-ferruginous above, the apical joint yellow. Wings hyaline, the apex of the forewing clouded beyond the cells. Clypeus and face fairly strongly punctured. Triangular area of the epinotum finely and closely transversely striate. Pygidial area subrectangular, slightly narrowed towards the apex, coarsely and sparsely punctured, the apical margin convex. Second sternite carinate down the middle, closely and shallowly punctured, the remaining sternites closely and finely punctured at the base, sparsely and coarsely on the tumid area. The sternites have a long yellowish pilosity. Metapleurae very strongly costate. The rest of the insect is very deeply punctured, closely so or reticulate-punctate except on the scutellum, metanotum and the fifth and sixth tergites. Inner orbits divergent below. Median area of the clypeus subhexagonal, widest at the posterior third, one-quarter longer than wide at that point, the anterior margin bisinuate. Apical joint of the flagellum curved, obliquely truncate, longer than wide at the base. Pronotal collar depressed in the middle. Anterior coxae produced outwardly in front into a sharp cone. Petiole nearly semicircular, nearly twice as wide as long, not quite half as wide again at the apex as at the base. The second tergite one-fourth longer than the petiole.

Zungeru, N. Nigeria, November, 1 ♂, type, 11 mm. long (W. Scott-Macfie); Dableck Island, 1 ♂, 14 mm. long; Tajura, Straits of Bab-el Mandeb, 1 ♂, 12.5 mm. long. Type in the British Museum.

The wide distribution and the variation in size are both remarkable.

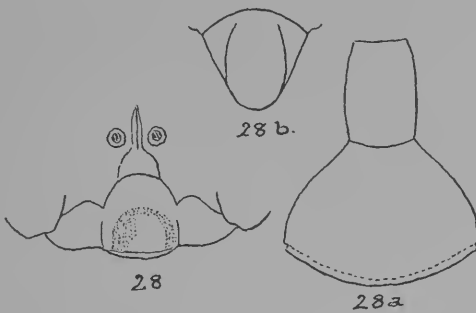


Fig. 28. *Cerckeris Horus* ♀, clypeus; a, first two tergites; b, pygidium.

C. Horus n.sp. (figs. 28, 28a and b).

♀. 8 mm. long. Black. Petiole, sides of the second tergite and the pygidium, ferruginous. Clypeus, face, frontal carina, underside of the scapes, the low tubercles on the shoulders of the pronotal collar, tegulae in greater part, a transverse mark on each side of the metanotum, apical bands on the third tergite and sternite and on the fifth tergite, pale yellow. Anterior and middle tibiae and tarsi yellowish white, anterior and middle femora and trochanters, pale ferruginous. Posterior femora fusco-ferruginous, tibiae and metatarsus yellowish white, the last four joints of the tarsus fuscous. Antennae brownish above, dirty yellow below. The puncturation of the head is fairly

fine and close except on the vertex, where it is larger and sparser. The pronotal collar, between the tubercles on the shoulders, is transversely rugulose. The mesonotum is shining, sparsely and coarsely punctured, its middle third concave and margined by longitudinal ridges which do not extend as far as the anterior and posterior margins. Scutellum a little more finely punctured than the mesonotum. Mesopleurae coarsely punctured, but not so closely as to be reticulate-punctate. Triangular area of the epinotum shining, with a crenulate groove down the middle, the rest of the epinotum and the tergites closely and strongly punctured. Second sternite with a low basal platform, very shallowly and finely punctured in the middle. The tumid parts of the fourth and fifth sternites are very prominent at the sides. Pygidial area ovate, with a few small punctures near the base. Inner orbits divergent below. Median area of the clypeus as long as wide in front, the anterior half slightly concave, the hind margin distinctly arcuate, the apical margin straight and narrowly reflected upwards. Petiole one-quarter longer than wide, widest in the middle, the sides moderately convex, not much shorter than the second tergite. Hind tibiae with six serrations on the upper margin.

♂. 7-9 mm. long. Petiole and basal half of the second tergite ferruginous, the petiole sometimes with a black spot in the middle. Third and sixth tergites and the third sternite with yellow bands, the second sternite sometimes with a yellow spot in the middle near the apex. Apical half of the pygidial area ferruginous. Otherwise like the ♀ in colour and sculpture, but the pygidial area is coarsely punctured and shining, and about half as long again as wide, the apical margin transverse, the sides feebly convex. Median area of the clypeus half as long again as wide, the apical margin tridentate. Petiole narrower than in the ♀, longer than wide.

Okahandja, S.W. Africa, March, 1 ♀, 15 ♂♂ (R. E. Turner). Types in the British Museum.

C. Isis n.sp. (figs. 29, 29a, b and c).

♀. 9 mm. long. Black. The frontal triangle and the base of the mandibles dirty yellow. Petiole and sides of the second tergite at the base ferruginous. An apical band on the third tergite and one on the fifth which does not reach the lateral margins, yellow. Antennae black above, fusco-ferruginous below. Tarsi, fore and middle tibiae outwardly, a streak on the upper side of the hind tibiae and the anterior half of the tegulae, straw-yellow. Wings hyaline, the apex of the forewing only faintly clouded. Upper part of the face reticulate-punctate, elsewhere the puncturation is neither close nor coarse. On the mesonotum the spaces between the punctures are about twice as wide as the punctures, and the punctures on the tergites are smaller than those on the mesonotum. Pygidial area elliptical, nearly twice as long as wide, widest before the middle, coarsely and closely punctured except near the apex where the punctures are much smaller. Median area of the clypeus moderately convex, as long as wide in front, the apical margin straight, with two small tubercles just behind the apical margin. Inner orbits parallel. Pronotal collar shorter in the middle than at the sides, not depressed in the middle. Mesopleurae without tubercles. Triangular area of the epinotum convex, smooth and shining, without a median groove, with longitudinal striae on the basal fourth. Petiole globose, wider at the apex than at the base, a little wider in the middle than long. The second tergite nearly half as long again as the first. Posterior tibiae with eight serrations on the upper margin.

♂. 8 mm. long. Colour as in the ♀, the third and sixth tergites with yellow bands. Tegulae entirely pale yellow. Median area of the clypeus convex,

longer than wide, the anterior margin indistinctly tridentate. Petiole half as long again as wide, almost cylindrical, not much shorter than the second tergite. The latter is three times wider at the apex than at the base. Pygidial area coarsely punctured, slightly wider at the base than at the apex, the sides and apical margin straight.

Sawmills, S. Rhodesia, December (G. Arnold). Types in the Rhodesia Museum.

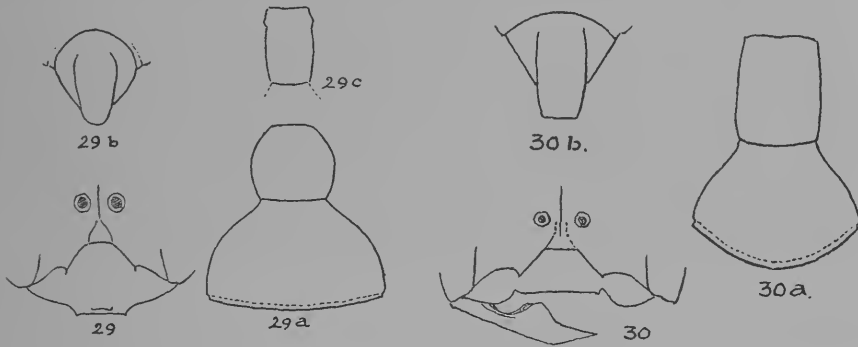


Fig. 29. *Cerceris Isis* ♀, clypeus; a, first two tergites; b, pygidium; c, ♂, first tergite.
Fig. 30. *Cerceris ugandensis* ♀, clypeus; a, first two tergites; b, pygidium.

C. ugandensis n.sp. (figs. 30, 30a and b).

♀. 13 mm. long. Black and dull. A spot on the temples, extreme base of the tibiae, extreme apex of the femora, and the pygidial area, ferruginous. Clypeus excepting the anterior margin, frontal carina and sides of the face below, sides of the petiole, a very small spot on each side of the second tergite near its base and the basal three-fourths of the second sternite, yellow. Mandibles flavo-ferruginous, the apex black. Antennae fusco-ferruginous below. Anterior tarsi ochreous, middle and hind tarsi fuscous. Anterior and middle tibiae, the apical half of the anterior and middle femora below, and the posterior coxae and trochanters outwardly, pale yellow. Wings pale fuscous, the costal half of the forewing darker than the other half. Clypeus finely coriaceous and dull. Lower face shallowly and finely punctured. The rest of the head reticulate-punctate, the punctures fairly large. Pronotum finely rugulose, the dorsal face of the collar shallowly punctured. Mesonotum finely and longitudinally rugose, shallowly and sparsely punctured between the rugae in front and at the sides. Scutellum with a sparse and elongate puncturation. Metanotum almost smooth. Mesopleurae rugose and reticulate-punctate. Epinotum strongly reticulate-punctate, the triangular area closely and obliquely rugose, with a deep median groove. Tergites shallowly, sparsely and coarsely punctured. Sternites slightly shining, the second very sparsely and indistinctly punctured, the others closely and finely. Pygidial area coarsely reticulate-rugose, elliptical, the apex broadly truncate, twice as long as wide. Mandibles bluntly angled on the outer margin, armed with a large tooth on the inner. This tooth is divided into two parts, the inner being broad and horizontal, the outer lamelliform and vertical. Head very broad. Median area of the clypeus almost semicircular, fully twice as wide in front as long, the apical margin almost straight and armed with a sharp tooth on each side. Frontal carina blunt. Antennal sockets twice as far from the anterior ocellus as from the clypeus. Second joint of the flagellum long, three and a half times

longer than wide at the apex and half as long again as the third. Posterior ocelli twice as far from the eyes as from each other, their distance from the eyes nearly equal to the length of the second joint of the flagellum. Mesopleurae unarmed. Petiole almost parallel-sided, fully one-third longer than wide and slightly longer than the second tergite. Posterior tibiae with five or six widely spaced serrations on the upper margin.

Budongo Forest, Unyoro, Uganda, December, 1 ♀; Daro Forest, Taro, Uganda, October, 1 ♀ (S. A. Neave). Type in the British Museum.

C. vumbui n.sp. (figs. 31, 31a and b).

♀. 10.5 mm. long. Black. Clypeus excepting the anterior margin and the posterior margin of the median area, sides of the face below, an apical band dilated laterally on the third tergite and a very narrow apical band on the fourth tergite, yellow. Metanotum, an apical median spot on the petiole, apical third of the second tergite, ferruginous. The rest of the abdominal segments are ferruginous, with the basal halves of the third to fifth tergites, the first sternite, base of the second and base and apex of the third to fifth sternites black. Legs ferruginous, the femora with a black streak above.

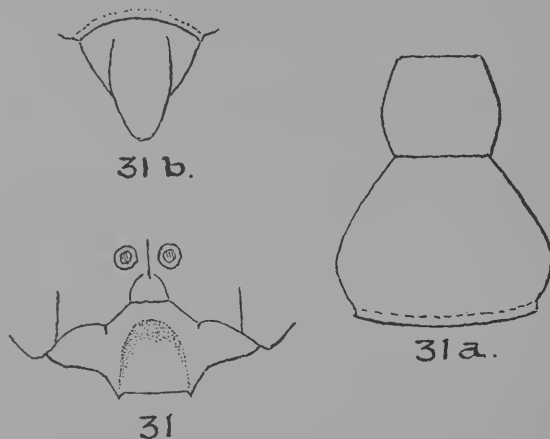


Fig. 31. *Cercheris vumbui* ♀, clypeus; a, first two tergites; b, pygidium.

Mandibles ferruginous, the apex black. Tegulae ferruginous. Wings hyaline, the radial cell and apex of the forewing infuscated. Clypeus and lower face with a fairly dense silvery pubescence. The median area of the clypeus is sparsely and strongly punctured, moderately shining, the punctures on the anterior half somewhat elongated. The lateral sclerites are dull and finely punctured. The upper part of the face as far as the ocelli is finely reticulate-rugose and closely punctured between the rugae. The rest of the head and the thorax, excepting the scutellum, metanotum and triangular area of the epinotum, is dull, very deeply and coarsely reticulate-punctate. The punctures are largest on the vertex, posterior half of the mesonotum and on the scutellum. Metanotum finely and sparsely punctured. Mesopleurae without tubercles. Triangular area of the epinotum with wide crenulate margins and median groove, obliquely striate, the striae indistinct towards the apex. Abdomen strongly punctured, closely so above, more sparsely on the tumid areas of the sternites. Second sternite with a basal platform. Pygidial area ovate, narrowed at the rounded apex, smooth at the sides and feebly rugose elsewhere except at the base where there are a few fine punctures. Median area of the

clypeus as long as wide, moderately concave except at the base and sides, the anterior margin convex and ending in a tooth on each side. Posterior ocelli separated from the eyes by a distance a little greater than the length of the first two joints of the flagellum. Seen from the side, the temples are wider than the eyes. Pronotal collar rounded transversely, not depressed in the middle. Petiole a little wider than long, widest at the posterior third, fairly convex at the sides, a little more than half as long as the second tergite. The latter at its widest is twice as wide as at the base. Posterior tibiae with seven serrations on the upper margin.

♂. 9 mm. long. Anterior margin of the median area of the clypeus ferruginous, the rest of the clypeus and the metanotum, black. Fifth tergite with a yellow apical band. Otherwise like the ♀ in colour and sculpture. Median area of the clypeus convex, one-fourth longer than wide, the apical margin straight. Petiole longer than in the ♀, a little longer than wide, widest near the apical margin. Pygidial area subrectangular, the sides feebly convex, the apical margin straight, longer than wide, sparsely punctured.

Vumbu Mts, Umtali, S.R., February, 2 ♀♀, 11 ♂♂ (G. Arnold). Types in the Rhodesia Museum.

C. rufiscutis Cameron (figs. 32, 32a, b and c). Sjoestedt's *Kilimandjaro-Meru Exp.* VIII, p. 278, ♀, ♂. 1910.

This species is given to considerable variation in colour. A detailed description of the ♀ is unnecessary, since *eulalia* Brauns, which has been very fully described by its author, is only a southern race of *rufiscutis*. The latter differs from the race *eulalia* as follows:

11-12 mm. long. The clypeus, except the anterior margin, is yellow. The yellow marks on the lower part of the face are wider. Scutellum, metanotum, the second tergite, excepting a basal median black spot, a line dividing the black and yellow areas on the third tergite, the apical third of the fourth tergite, apical half of the fifth, bright ferruginous. Lateral spots on the fourth, and almost the whole of the fifth sternite, ferruginous. Upper surface of the anterior femora and of the middle and hind femora and tibiae, black. The rugae on the triangular area of the epinotum are closer, finer and more wavy. The cariniform tubercle on the median area of the clypeus is shorter, extending over only the anterior third (in *eulalia* it extends over more than the anterior half, contrary to Brauns's statement). The anterior margin is less depressed and is transverse, not arcuate as in *eulalia*. The posterior tibiae have six serrations on the upper margin, whereas there are seven in *eulalia*. Mesopleurae without a tubercle.

♂. 9 mm. long. Clypeus, excepting the extreme anterior margin, lower face and frontal carina, and a streak behind the posterior orbits, yellow; the rest of the head black. The black area on the first tergite and at the base of the second and third more extensive than in the ♀. The fourth and fifth tergites are black, excepting a thin ferruginous line on the apical margin; they have a rather dense brownish golden pubescence which becomes more evident when these segments are viewed obliquely from in front. The pubescence in *eulalia* is short and sparse. The second and third sternites have lateral spots of yellow. The puncturation of the tergites is sparser and relatively much coarser than in the ♀. Pygidial area almost rectangular, the sides feebly convex, fully twice as long as wide. Median area of the clypeus moderately convex, half as long again as wide, the anterior margin tridentate. Petiole a little longer than wide, nearly as long as the second tergite, the sides feebly convex. Apical joint of

the flagellum curved, three times as long as wide at the base, the apex truncate. The penultimate joint is arcuately excised on the inside.

Brit. E. Africa and Uganda.

C. rufiscutis Cam., race *decolorata* n.r. (figs. 32c, 33 and 33a).

A more robust looking insect than *rufiscutis* i.sp. and with a noticeably different colour pattern. Nevertheless, the similarity in the structure of the clypeus and the genitalia does not permit it to be considered as anything but a race of that species.

♀. 12 mm. long. Black. Posterior half or more of the clypeus, sides of the face below, frontal carina, dorsal face of the pronotal collar, excepting the middle, metanotum, an oblong mark on the sides of the epinotum, a large rhomboid mark on each side of the petiole, apical bands, narrowly interrupted medially and strongly dilated laterally, on tergites 2-4 and lateral spots on the second and third sternites, lemon-yellow. The vertex and upper half of the

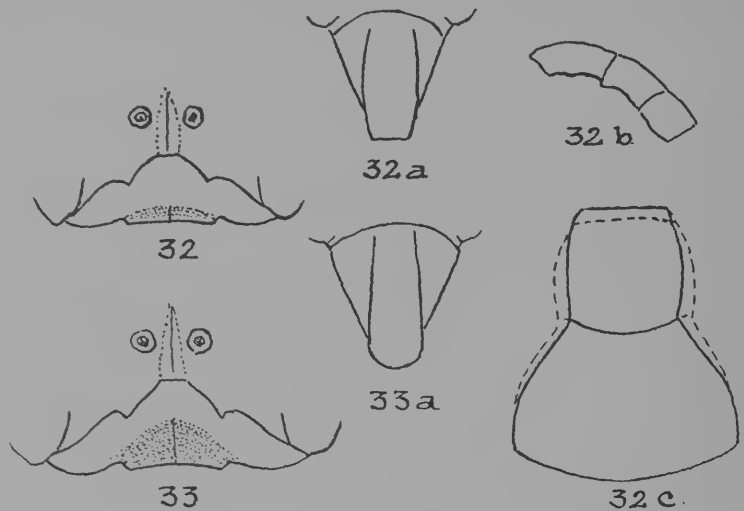


Fig. 32. *Cerceris rufiscutis* ♀, clypeus; a, pygidium; b, ♂, apical joints of flagellum; c, ♀, first two tergites (dotted line, of race *decolorata*).

Fig. 33. *C. rufiscutis*, race *decolorata*, ♀, clypeus; a, pygidium.

temples, apical half of the fifth tergite, the whole of the sixth, the apical third of the fourth sternite and the whole of the fifth and sixth sternites, ferruginous. Antennae reddish ochreous below, ferruginous above, the sixth to tenth joints more or less blackish above. Mandibles yellow, fusco-ferruginous at the apex. Legs very pale red or reddish orange, the coxae and trochanters blackish. The sculpture is like that of *rufiscutis* but less close on the epinotum and abdomen. The pygidial area is more closely rugose, a little longer, and wider in its apical than in its basal half. The head is relatively wider, but the inner orbits are less divergent below. Flagellum and clypeus as in the type of the species, but the median carina on the clypeus is a little longer. Petiole thicker and shorter than in the type of the species.

♂. 9 mm. long. Clypeus, face and frontal carina, lemon-yellow; vertex and temples entirely black. Apical margins of the sixth and seventh sternites and apex of the pygidial area, ferruginous. The rest of the abdomen is black

with yellow bands, that of the sixth covering nearly the whole of the segment, and on the seventh all but the base and apical margin. Fore and middle tibiae and the hind tibiae underneath, yellow. Spots on the fore and middle coxae and the whole of the hind coxae, pale yellow. Otherwise like the ♀ in colour. The sculpture is like that of the type of the species ♂, but the striae on the triangular area of the epinotum are sharper. Otherwise like *rufiscutis* ♂, including the genitalia and flagellum.

Magadi Junction, Brit. E. Africa, April, 4 ♀♀, 3 ♂♂ (F. G. Hamilton). Types in the British Museum.

C. repraesentans Turner (figs. 34, 34 a and b). *Ann. Mag. N.H.* (9), IV, p. 49, ♀. 1919.

♀. 13 mm. long. Black; mandibles, excepting the apex, clypeus, the sides of the face widely, frontal carina, a narrow line margining the outer orbits and dilated above, an interrupted band on the pronotum, tegulae, a large spot on each side of the scutellum, the metanotum, a large spot on the sides of the epinotum and petiole, wide bands emarginate in front on the second to fifth tergites, hind coxae above, hind trochanters, the femora and tibiae below, yellow; antennae, the apical half fuscous above, femora, tibiae above and the tarsi, ferruginous testaceous; pygidial area ferruginous; sternites 2-5 with a large yellow spot on each side, the fifth and sixth testaceous; wings subhyaline, the apex slightly fuscous, the veins ferruginous.

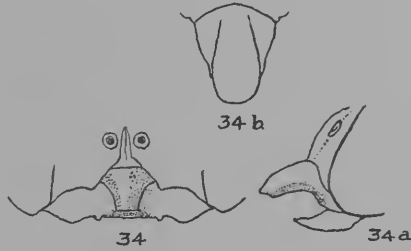


Fig. 34. *Cercheris repraesentans* ♀, clypeus; a, clypeus; b, pygidium.

“Mandibles with a large triangular tooth on the middle of the inner margin, blunt at the apex. Clypeus with a porrect lamella, which is free from the base, gradually narrowed towards the truncate apex and nearly twice as long as the apical breadth; the portion of the clypeus below the lamella short and transverse at the apex. Antennae inserted about four times as far from the anterior ocellus as from the base of the clypeus, interantennal carina well developed, second joint of the flagellum half as long again as the third. Head large, broader than the thorax, closely punctured, the front with a tendency to longitudinal striation. Mesonotum and scutellum irregularly longitudinally striate, punctured between the striae; mesopleurae closely punctured, not tuberculate. Median segment closely punctured; the basal area more or less obliquely striated, with a low longitudinal carina in the middle. First tergite broader than long, second sternite without an elevated basal area; all the tergites sparsely punctured, the sternites more finely punctured; pygidial area granulate, almost parallel-sided, only a little narrowed at the base, nearly three times as long as the greatest breadth.

“*Hab.* Masai Reserve, Brit. E. Africa, May 20, 1913, 2 ♀♀ (T. J. Anderson).”

The type is in the British Museum, and the figures given here have been drawn from it. The mesopleurae have a very small tubercle.

C. bicolor Smith (figs. 35, 35 a, b, c and d). *Cat. Hymen. B.M.* IV, p. 447, ♀. 1856.

C. fossor Smith. *Cat. Hymen. B.M.* IV, p. 447, ♂. 1856.

♀. 12 mm. long. Head and thorax black, abdomen and the legs, excepting the coxae, ferruginous. Sides of the face, frontal carina, a spot on the lamina

of the clypeus, basal two-thirds of the mandibles, a round spot on the temples, a band interrupted in the middle on the pronotal collar and the tegulae, ochreous. Clypeus and lower part of the face shallowly and sparsely punctured, the rest of the head and the thorax closely and coarsely reticulate-punctate and dull, most coarsely punctured on the epinotum, least so on the scutellum. Triangular area of the epinotum transversely rugose. Tergites 1-5 coarsely, deeply but not closely punctured, moderately shining; the pygidial area transversely rugulose, longitudinally so near the apex, slightly narrowed towards the apex which is unequally trisinate. Sternites shining and shallowly punctured. Antennae black. Wings pale fuscous, with a violaceous lustre. Inner orbits divergent below. Median area of the clypeus with a semi-cylindrical lamina projecting freely almost from its base; below the lamina the clypeus is concave, with a blunt tooth on each side of the apical margin.

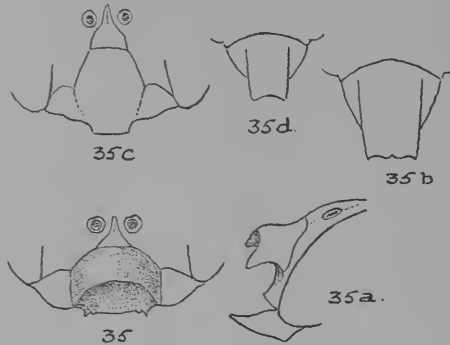


Fig. 35. *Cerceris bicolor* ♀, clypeus; a, clypeus; b, pygidium; ♂, c, clypeus; d, pygidium.

♂. 12 mm. long. Apex of the median area of the clypeus, scapes below, basal half of the mandibles, anterior tarsi, tibiae and a spot on the outside of the femora, the middle tibiae and the base of the hind femora outwardly, pale yellow. Middle and hind femora fusco-ferruginous at the apex. A small spot on each side of the epinotal declivity and an apical band, dilated laterally, on the first tergite, yellow, the rest of the first tergite black. Otherwise like the ♀ in colour. Median area of the clypeus about half as long again as wide, moderately convex, the apical margin straight. Pygidial area subrectangular, almost parallel-sided, the apical margin concave.

Gambia. Described from the types in the British Museum.

A ♀ from Minna, N. Nigeria (J. Simpson), in the British Museum coll. has the anterior margin of the lamina on the clypeus bisinuate, instead of arcuate as in the type.

C. albifrons Smith. *Loc. cit.* p. 449, ♂.

“♂. 4 lines long (ca. 9 mm.). Black, closely punctured; the face white, the flagellum fulvous beneath. Thorax: a white spot on the tegulae in front; the tibiae and tarsi pale testaceous, the femora rufo-testaceous as well as the posterior tibiae and tarsi; wings fulvo-hyaline and irridescent. Abdomen: the basal segment ferruginous, the third segment with a narrow white marginal fascia.”

An examination of the type in the British Museum shows that this species is related to *pearstonensis* Cam. and *amakosa* Brauns. The dorsal face of the pronotal collar is depressed in the middle, and the shoulders are bluntly

angular. Triangular area of the epinotum shining, with oblique striae at the sides which do not reach the deep median groove. Puncturation coarse and deep, almost reticulate-punctate, except on the petiole. Face and clypeus shallowly and not densely punctured. Pygidial area U-shaped, coarsely punctured.

♀. 10 mm. long. Black. Mandibles ferruginous, paler at the base, black at the apex. Head entirely black, excepting a yellow spot on each side of the face at about the level of the antennal sockets. Antennae black above, ferruginous below. There is a very small yellowish brown spot on the shoulders of the pronotal collar. Thorax black. First abdominal segment and sides of the second tergite ferruginous, the rest of the abdomen black, with ivory-white bands on the second, third and fifth segments. The band on the second is narrow, on the third dilated laterally and on the fifth short, not reaching the lateral margins. A spot on the tegulae in front is ivory-white. Median area of the clypeus one-third wider in front than long, the raised part like that of *pearstonensis* but the lateral angles of the pre-apical margin are more acute, produced farther forwards and the excision between them arcuate and not angular. Inner orbits nearly parallel; posterior ocelli separated from the eyes by a distance slightly greater than the length of the second and third joints of the flagellum. Pygidial area three-fourths longer than wide at the base, very slightly narrowed apically, the apical margin rounded.

Hab.? British Museum coll.

C. kilimandjaroensis Cam. (figs. 36 and 36a). Sjoestedt's *Kilimandjaro-Meru Exp.* VIII, p. 277, ♀, ♂. 1910.

♀. 9-10 mm. long. Black. Base of the mandibles, basal two-thirds of the median area of the clypeus, frontal carina, sides of the face narrowly up to the level of the antennal sockets, a spot on the tegulae, the metanotum, a transverse spot on each side of the second tergite, an apical band dilated laterally on the third tergite, a similar one on the fourth, but narrower and widely interrupted in the middle, and the apical half of the fifth, yellow. Antennae ochreous below, brown above. Tibiae, anterior and middle tarsi yellow, the hind tarsi fuscous. The hind tibiae with a black streak outwardly at the apex. Wings hyaline, the apex of the forewing clouded. Face and clypeus coriaceous and punctate. Metanotum smooth, with a few small punctures. Triangular area of the epinotum bicarinate down the middle, the space between the carinae crenulate, strongly and obliquely striate outside the carinae. Scutellum coarsely but not closely punctured, the rest of the head and thorax coarsely reticulate-punctate, the mesonotum with traces of longitudinal rugae. Tergites 1-5 strongly and closely punctured, the first two reticulate-punctate. Pygidial area dull, subovate, a little longer than wide, twice as wide at the base as at the apex, coarsely punctured at the base, finely granulate on the apical half. Second sternite with a small basal platform. Inner orbits parallel. Median area of the clypeus subhexagonal, very little longer than wide, feebly convex, raised from the base almost to the apical margin, the pre-apical margin with a small arcuate excision in the middle and broad angular lobes on each side. The distance between the posterior ocelli and the eyes is equal to the length of the second and third joints of the flagellum. Mesopleurae without tubercles. Petiole quadrate, one-third wider than long. The second tergite is about one-third longer than the petiole, and two and a third times wider at the apex than at the base. Posterior tibiae with five serrations on the upper margin.

♂. 6.5 mm. long. Fifth tergite black, the sixth yellow except at the base and sides. The posterior tibiae blackish on the whole of the inner side. The

yellow marks on the face are elongate and almost rectangular. Triangular area of the epinotum with a median groove and irregularly and feebly rugose. The puncturation is not so close as in the ♀, otherwise like that sex in colour and sculpture. Petiole cylindrical, half as long again as wide, two-thirds as long as the second tergite. Median area of the clypeus oval, the anterior margin convex. Pygidial area a little longer than wide, coarsely punctured, the sides feebly convex, the apex transverse.

Kibonoto, Kilimandjaro; Mt Kokanjero, Uganda; Loddo Hawash, Abyssinia.

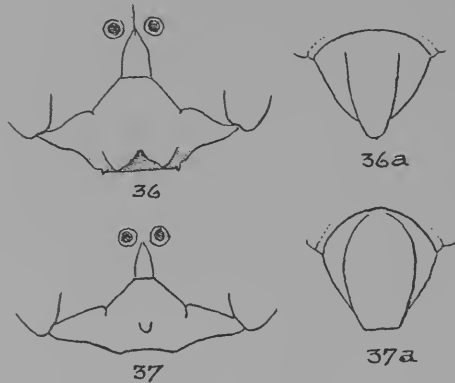


Fig. 36. *Cerceris kilimandjaroensis* ♀, clypeus; a, pygidium.
Fig. 37. *Cerceris raptor* ♀, clypeus; a, pygidium.

C. raptor Smith (figs. 37 and 37a). *Cat. Hymen. B.M.* iv, p. 449, ♀. 1856.

♀. 9 mm. long. Black. Mandibles, clypeus, sides of the face, frontal carina, the scapes below, a spot on the shoulders of the pronotal collar, a spot on the tegulae, metanotum, a transverse spot at the base of the second tergite, transverse bands dilated laterally on the third and fifth tergites, and lateral spots on the third sternite, yellow. Antennae ochreous beneath. Tibiae and tarsi yellow, the posterior tibiae fuscous on the inner side near the apex, the posterior tarsi, excepting the basal joint, fuscous. Anterior and middle femora yellow underneath except at the base. Wings hyaline, the forewing clouded at the apex. Closely punctured. The triangular area of the epinotum obliquely striate. Median area of the clypeus as long as wide, with a small tubercle in the middle nearer to the apical than to the basal margin. Pygidial area ovate, coarsely and irregularly rugose, two-thirds longer than wide, the apex truncate.

Whydah, W. Africa. Described from the type in the British Museum.

C. synagroides Turner. *Ann. Mag. N.H.* (8), II, p. 413, ♀. 1912.

“♀. 30 mm. long. Black; clypeus, face, base of the mandibles and the scapes, fusco-ferruginous; fourth and fifth tergites orange-yellow, the fifth and sixth sternites and apex of the fourth, orange; wings fusco-violaceous; second sternite without a basal platform; clypeus acutely tuberculate, the anterior margin transverse and quadridentate; inner orbits strongly divergent below; triangular area of the epinotum transversely striate.

“Clypeus produced into a large tubercle near the apex, the extreme apical margin nearly transverse, slightly bisinuate, with a tooth at each angle, produced in the middle into two short blunt teeth. Mandibles with a very large

triangular tooth near the middle of the inner margin. Head very large, cheeks (temples) broader than the eyes, frontal carina elevated and somewhat arched, continued to the anterior ocellus. Antennae separated from the base of the clypeus by a distance equal to about three-quarters of the length of the scape. Vertex closely and rather coarsely punctured, the front above the antennae irregularly longitudinally striate, front below the antennae rather sparsely punctured, clypeus smooth. Second joint of the flagellum as long as the first and third combined. Thorax closely and rather coarsely punctured, scutellum shallowly longitudinally depressed in the middle; basal area of the median segment rather indistinctly striated. Abdomen finely and sparsely punctured; the basal segment more than half as broad again as long; pygidial area narrow, the sides convergent towards the apex, not rounded, the base nearly four times as broad as the apex, which is very narrowly truncate, the sides of the pygidial area with a fringe of fulvous hairs. Second cubital cell nearly as long on the cubitus as the third, the petiole short.

“*Hab.* Nyasaland, Mombera district, 4000 ft., June 1910 (S. A. Neave). This splendid species is by far the largest of the genus, and in size and colour shows a remarkable resemblance to many species of the genus *Synagris*.”

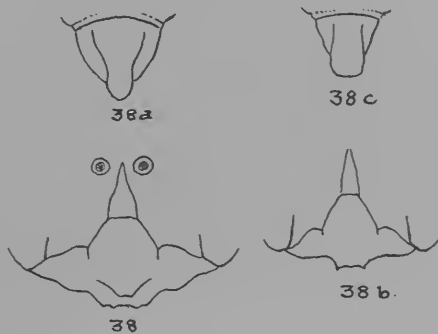


Fig. 38. *Cerceris barbifera* ♀, clypeus; a, pygidium; ♂, b, clypeus; c, pygidium.

C. barbifera Bischoff (figs. 38, 38a, b and c). *Deutsch. Zentr. Afr. Exp.* III, p. 222, ♀. 1911.

C. bagandarum Turner. *Ann. Mag. N.H.* (9), II, p. 465, ♀, ♂. 1918.

♀. 16 mm. long. Head and thorax ferruginous, the clypeus, face and frontal carina yellow. Between the carina and the anterior ocellus there is a transverse black bar extending from eye to eye. Mesonotum, excepting the lateral margins, black. Triangular area of the epinotum margined with black; the lower part of the epinotum, the metanotum and a transverse bar on the mesopleurae also black. First two tergites lemon-yellow, their extreme basal margin black; second sternite in the middle and the apical segment ferruginous, the rest of the abdomen black. Legs and antennae ferruginous. Head above the antennae and the thorax dull, strongly reticulate-punctate, the clypeus and lower face with a fine golden pubescence and microscopically punctured. Triangular area of the epinotum transversely costate (about eight ridges). Abdomen very finely and closely punctured, with a few larger punctures interspersed and slightly shining. Pygidial area subtriangular, narrowed from the base to beyond the middle, thence almost parallel-sided to the apex which is rounded. Mandibles with a large triangular tooth on the inner margin at about one-third from the apex. Upper two-thirds of the median area of the clypeus

raised, ending below in a blunt point, the apical margin below it with a blunt tooth on each side. Second joint of the flagellum two and a half times longer than the first. Mesopleurae with a small tubercle. Petiole wider than long, not much shorter than the second tergite. Wings faintly fuscous, yellowish basally, the apex narrowly and more deeply infuscated.

♂. 11 mm. long. Colour as in the ♀, but the sides of the thorax excepting the upper part of the mesopleurae and the whole of the triangular area of the epinotum are black. The third to fifth tergites have narrow streaks of yellow at the sides. Median area of the clypeus one-fourth longer than wide, the apical margin indistinctly tridentate. Petiole wider than long. Sixth sternite with an acute spine and a tuft of long golden hairs at the apical angles. Pygidial area nearly parallel-sided, half as long again as wide, the apical margin transverse.

Kasindi, Lake Albert Edward; Uganda.

Closely related to *diodonta* Schlett. In the latter the second tergite is broader and more distinctly punctured.

C. barbifera, var. *sodalis* Turner. *Ann. Mag. N.H.* (9), II, p. 466, ♀, ♂. 1918.

"♀, ♂. Very close to *bagandarum* (i.e. *barbifera*) and practically identical with that species in the structure, colour and sculpture of the head, thorax and median segment, the female, however, has the posterior margin of the pronotum and the postscutellum yellow. The colour of the abdomen is ferruginous in both sexes, the sternites at the base and the middle of the second tergite black; the first tergite with a narrow apical band, second very broadly at the sides and narrowly at the apex, tergites 3-5 in the female and 3-6 in the male rather less broadly at the sides and narrowly at the apex, yellow. The sixth tergite of the female is very narrow at the apex, more so than in *bagandarum*, and the second tergite is more distinctly punctured in both sexes than in that species, though less closely than in *diodonta*. The second tergite of the female is broader than in *bagandarum*, though scarcely as broad as in *diodonta*."

Brit. E. Africa.

C. Andersoni Turner (figs. 39 and 39a). *Loc. cit.* p. 467, ♀.

"♀. 10 mm. long. Black; mandibles, excepting the apex, flagellum but with the apical joints fuscous above, tegulae, sixth abdominal segment and the legs, excepting the coxae, ferruginous; a large spot on the lamina of the clypeus, the frontal carina, wide longitudinal fascia on each side of the face, postscutellum, narrow apical bands on the first, third, fourth and fifth tergites and a transverse spot on each side of the third sternite, yellow; wings fuscohyaline, the apex and radial cell infuscated, the veins fuscous, the stigma testaceous; clypeus with a free and porrect lamina; mesopleurae not tuberculate; second sternite without a basal platform. Clypeus with a porrect lamina, free from near the base, the lamina coarsely punctured at the sides, the apical margin very shallowly and broadly emarginate and nearly equal to the distance from the base of the clypeus to the apex of the lamina; the clypeus below the lamina smooth and shining, truncate at the apex. Antennae inserted about twice as far from the anterior ocellus as from the base of the clypeus, the second joint of the flagellum less than half as long again as the third. Inner orbits of the eyes almost parallel; posterior ocelli farther from the eyes than from each other. Face sparsely punctured; head and thorax very closely rugosely punctured, the postscutellum more sparsely punctured; pronotum about two-thirds as long as the scutellum. Median segment rugosely punctured; the basal area triangular, almost equilateral, obliquely striated, with a

median longitudinal groove, the apex irregularly transversely striated. Tergites strongly but not closely punctured, first tergite broader at the apex than long; pygidial area rugulose, elongate, fully twice as long as its greatest breadth, and more than three times as long as its apical breadth, the apex subtruncate. Second sternite shining, sparsely punctured.

"*Hab.* Eastern edge of forest of Aberdare Mountains, 7300 ft. (T. J. Anderson), February.

"This belongs to the group of the European *C. labiata*, and is rather closely related to that species, but is not very near any other Ethiopian species. The interantennal carina is less elevated than in *labiata*, and is flattened towards the base of the clypeus. Two females from Mlanje Plateau, Nyasaland, 6500 ft. (S. A. Neave), December 1913, have the postscutellum black and the lamina of the clypeus much reduced in size. These may represent a subspecies, but I cannot regard them as specifically distinct."

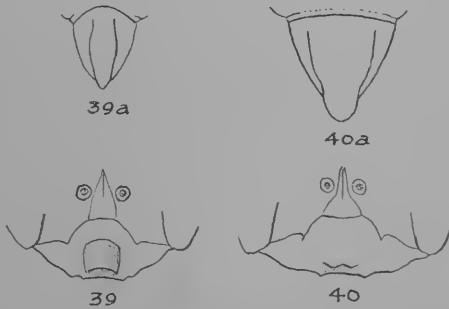


Fig. 39. *Cerceris Andersoni* ♀, clypeus; a, pygidium.
Fig. 40. *Cerceris yalensis* ♀, clypeus; a, pygidium.

C. yalensis Turner (figs. 40 and 40a). *Trans. Ent. Soc. London*, Part 4, p. 744, ♀, ♂. 1912.

"♀. 14 mm. long. Black; clypeus, face below the antennae, a spot near the eyes and the anterior femora below, yellow; abdomen, excepting the first segment, ochreous; wings fusco-hyaline; second sternite without a basal platform; triangular area of the epinotum striated lengthwise.

"♂. 11 mm. long. Similar to the ♀; the triangular area of the epinotum indistinctly transversely striated, the apical angles of the sixth sternite distinctly dentate.

"♀. Clypeus broad, the middle lobe more than half as broad again as long, the anterior margin almost transverse, very feebly quadridentate, the distance between the base of the clypeus and the antennae equal to about half the length of the clypeus; interantennal carina high and narrow, triangularly truncate at the apex; antennae rather stout, the second joint of the flagellum distinctly longer than the third. Cheeks nearly as broad as the eyes; posterior ocelli more than half as far again from the eyes as from each other. Clypeus and front below the base of the antennae sparsely punctured; front above the antennae irregularly longitudinally striated, vertex closely punctured. Pleurae coarsely punctured striate; thorax very sparsely punctured in the middle, the punctures more or less confluent on the sides of the mesonotum. Median segment strongly, but not closely, punctured, the triangular area at the base coarsely longitudinally striated. Abdomen almost smooth, the fifth segment shallowly and sparsely punctured, first dorsal segment more than twice as

broad as long, the segments not strongly constricted; pygidial area granulate, gradually narrowed from the base, narrowly rounded at the apex, less than twice as long as the basal breadth, with a fringe of short hairs on the sides....

"♂. Head and thorax closely and rather deeply punctured, sparsely on the clypeus and front below the base of the antennae; middle lobe of the clypeus longer than broad, with three indistinct teeth at the apex. Apical joint of the flagellum slightly curved and truncate at the apex. Basal area of the median segment shining, with a median groove and very obscurely and transversely striated. Abdomen sparsely punctured, the basal segment not quite twice as broad as long; sixth ventral segment with a broad tooth on each side at the apical margin; pygidial area sparsely and coarsely punctured, twice as long as broad, the sides almost parallel, truncate at the apex...."

Yala River, South of Kakunga Forest, Brit. E. Africa; Entebbe, Uganda.

C. Yungvei Cameron (figs. 41, 41a and b). Sjoestedt's *Kilimandjaro-Meru Exp.* VIII, p. 273, ♀. 1910.

C. massaica Cameron. Sjoestedt's *Kilimandjaro-Meru Exp.* VIII, p. 274, ♂. 1910.

♀. 11 mm. long. Black. Face and greater part of the clypeus, a band on the third tergite and sternite and narrow bands suffused with red on the fourth and fifth tergites, yellow. The anterior margin of the clypeus and the hind margin of its median area are black. The yellow band on the third tergite is dilated at the sides. Antennae, tegulae, the apical margin of the first two tergites, the sides of the fourth and fifth, a narrow band between the basal black and apical yellow areas of the same segments, the whole of the sixth segment and the apical halves of the second, fourth and fifth sternites, ferruginous. Legs ferruginous, the anterior femora, the middle and hind femora and tibiae, blackish above. Wings hyaline, slightly clouded at the apex. Median area of the clypeus shining, with scattered, large and very shallow punctures. Triangular area of the epinotum slightly shining, grooved down the middle, obliquely striate on each side, the striate obsolescent towards the middle. The rest of the body strongly and closely punctured, reticulate-punctate except on the scutellum, metanotum, sternites and pygidial area. The latter is subovate, dull, coriaceous rugose, nearly twice as long as wide, considerably narrowed towards the apex which is rounded. Median area of the clypeus shallowly concave over the anterior half, about as long as wide, the apical margin narrowly reflected, convex and armed with a tooth on each side. The distance between the posterior ocelli and the eyes is equal to the length of the second and third joints of the flagellum. Mesopleurae not tuberculate. Petiole wider than long, the sides feebly convex. Posterior tibiae with five serrations on the upper margin.

♂. 9 mm. long. Median area of the clypeus black. Flagellum, excepting the second and third joints, blackish above. Tergites 3-6 with apical yellow bands which are more or less dilated laterally. Otherwise like the ♀ in colour and sculpture. Median area of the clypeus oval, convex, about twice as long as wide, the apical margin convex. Petiole slightly narrower than in the ♀. Pygidial area rectangular, two-thirds longer than wide, the apical margin transverse. Otherwise like the ♀.

Kilimandjaro, Kibonoto; Aberdare Mts., Brit. E. Africa.

The ♂ agrees very well with Cameron's description of *massaica* which I think should be sunk as a synonym.

C. albigena Cameron (figs. 42 and 42a). *Trans. S. Afr. Phil. Soc.* p. 217, ♀. 1905.

"Black; face, inner orbits broadly to the middle of the eyes, basal half of the mandibles, tegulae, two lines on the scutellum a broad mark on the base of the second abdominal segment, rounded laterally and narrowed at the base in the middle, the apex and sides of the third segment, a narrow interrupted line on the apex of the fourth, a shorter broader one of equal width on the fifth, and a small spot on the sides, whitish yellow. Legs red, the outer side of the tibiae white, the inner side of the hinder tibiae and the hind tarsi infuscated. Wings hyaline, slightly smoky, the nervures and stigma black. ♀. Length 9 mm. Cape Colony, Pearston.

"Metanotal area (*i.e.* triangular area of the epinotum) smooth and shining; a narrow furrow in the centre, ending in a depression at the apex. Front and vertex closely and distinctly punctured. Hind ocelli separated from each other by a slightly less distance than they are from the eyes; antennal keel large, plate-like, obliquely narrowed at the base and apex and continued above as a narrow keel. Face and clypeus sparsely punctured, flat, the cheeks covered with white hair. Apex of clypeus black, depressed in the middle, transverse, the sides ending in short, bluntly rounded teeth; the sides broadly, roundly

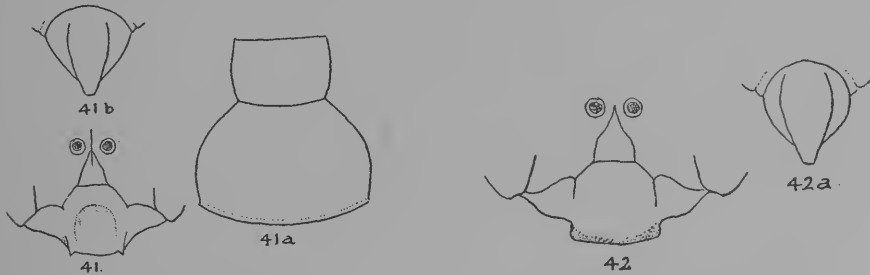


Fig. 41. *Cerckeris Yungvei* ♀, clypeus; a, first two tergites; b, pygidium.
Fig. 42. *Cerckeris albigena* ♀, clypeus; a, pygidium.

incised to near the outer edge. Pronotum rather strongly punctured, broadly depressed in the middle; mesonotum more sparsely punctured and furrowed in the middle at the base, the scutellum still more sparsely punctured. Metanotum (epinotum) regularly punctured, the punctures clearly separated, the apex broadly depressed. Propleurae irregularly punctured, more strongly above; mesopleurae strongly and regularly punctured; the metapleurae aciculated. Abdomen strongly punctured; the first segment thick, about one-fourth longer than thick; its apex narrowly rufous. Pygidium punctured, except at the apex, narrowly rounded at the base, becoming gradually narrowed towards the apex from the basal fourth; the apex bluntly rounded and not half the width of the base; the apical fourth of the epipygium roundly incised. The third segment is largely white below."

The type is in the British Museum. The dorsal face of the pronotal collar is distinctly concave in the middle. The petiole is barrel-shaped and about as long as the second tergite.

C. erythroura Cameron (figs. 43, 43a and b). Sjoestedt's *Kilimandjaro-Meru Exp.* VIII, p. 276, ♀, ♂. 1910.

♀. 12 mm. long. Black. Pronotal collar except in the middle, metanotum, a wide apical band, narrowed and interrupted medially on the first tergite and

apical bands on the second to fourth tergites, yellow. The band on the second is very narrow, that of the third the widest. Mandibles except at the apex, face, clypeus excepting the porrect lamina at the apex, antennae excepting the apical joints above, tegulae, apical half or less of the fifth abdominal segment and the whole of the sixth, ferruginous. Legs ferruginous, the middle and hind femora blackish, the posterior tarsi fusco-ferruginous, the posterior coxae yellow above. Wings hyaline, faintly smoky, the costal margin and apex darker, the stigma ochreous. Clypeus and face dull, very finely and closely punctured, the face with a sparse and large puncturation superimposed. Vertex and temples reticulate-punctate. Pronotal collar aciculate and rugulose in front, moderately punctured above. Mesonotum and scutellum longitudinally rugose and punctured between the rugae. Metanotum almost smooth. Triangular area of the epinotum obliquely striate, feebly and transversely striate at the apex, grooved down the middle; the rest of the epinotum and the mesopleurae reticulate-punctate. Tergites 1-5 coarsely and rather sparsely punctured, the punctures increasing in size towards the apical margin. Pygidial area dull, closely rugose, twice as long as wide, slightly widened towards the apex which is convex. Sternites finely and shallowly punctured. Inner orbits almost parallel. Mandibles with a large truncated tooth on the inner margin at the basal third, and obtusely angulated on the outer margin beyond the middle. Median area of the clypeus flat, with a crescentic porrect lamina on the anterior margin and a tooth on each side. Excluding the lamina, the median area is nearly twice as wide as long. Frontal carina very obtuse. The distance between the posterior ocelli and the eyes is less than the length of the first two joints of the flagellum. The second joint of the flagellum is fairly long, half as long again as the third and three times longer than wide at the apex. Petiole a little wider than long, about two-thirds as long as the second tergite. Posterior tibiae with five serrations on the upper margin.

♂. 10 mm. long. Face, clypeus and frontal carina lemon-yellow. The apical band on the first tergite is narrow, the sixth abdominal segment, except at the base, and the seventh are ferruginous. Posterior trochanters spotted with yellow. Otherwise like the ♀ in colour and sculpture. Median area of the clypeus suboctagonal, nearly one-third longer than wide, the apical margin feebly tridentate. Second joint of the flagellum one-fourth longer than the third, the apical joint obliquely truncate and longer than the penultimate. Petiole widest beyond the middle, as long as wide, and nearly as long as the second tergite. Pygidial area almost parallel-sided, fully twice as long as wide.

Kilimandjaro, Kibonoto; Masai Reserve, Brit. E. Africa.
Described from the types in the British Museum.

C. rigida Smith. *Cat. Hymen. B.M.* IV, p. 449, ♂. 1856.

“♂. Length 4 lines. Black: the face below the antennae, the scape in front and the mandibles, yellow; the scape above and the flagellum rufopiceous. Thorax and abdomen covered with large deep confluent punctured; the postscutellum, a spot on the tegulae in front, and another on each side of

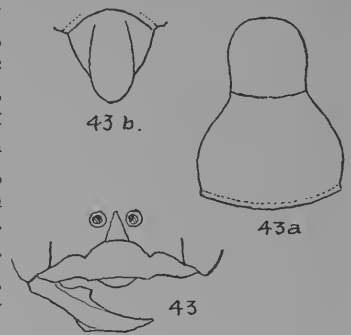


Fig. 43. *Cerceris erythroua* ♀, clypeus; a, first two tergites; b, pygidium.

the metathorax, yellow; the wings hyaline, with a darker cloud at their apical margins; the legs yellow, the anterior and intermediate femora with a black stripe at their base above, the posterior femora and tibiae black above, with their base and apex rufo-piceous, the posterior tarsi rufo-piceous. Abdomen: the basal segment with a spot on each side, the following segment with an interrupted yellow line on its apical margin, the fourth and fifth usually entire.

“*Hab.* Port Natal.”

The following notes are based on an examination of the type in the British Museum.

The sculpture, excepting that of the face and clypeus, is exceedingly coarse and deep. The petiole is about as long as wide and as long as the second tergite. The triangular area of the epinotum is somewhat gibbous, closely transversely striate and grooved down the middle. The pygidial area is about twice as long as wide, the apical margin and the sides feebly convex. Inner orbits divergent below. Median area of the clypeus as long as wide, feebly tridentate on the apical margin.

C. flavifrons Smith. *Loc. cit.* p. 448, ♂.

“♂. Length $4\frac{1}{2}$ lines. Head and thorax black, closely punctured; the face, scape in front, and the mandibles, pale yellow; a minute yellow spot behind the eyes; the flagellum fulvous towards the base. Thorax: an interrupted line on the collar, a spot on the tegulae in front, two spots on the scutellum, the post-scutellum, and a large oblong macula on each side of the metathorax and the legs, yellow; the femora above rufo-piceous, the tarsi and posterior tibiae slightly ferruginous; the wings fusco-hyaline, with a violet iridescence. Abdomen pale ferruginous, with a yellow line on the posterior margin and at the sides.

“*Hab.* W. Africa.”

The following notes are based on an examination of the type in the British Museum.

Clypeus and face fairly strongly but not closely punctured. Head and thorax closely and strongly punctured, less coarsely on the head and pronotum than elsewhere. Triangular area of the epinotum coarsely and obliquely rugose. Abdomen coarsely and closely punctured, moderately shining. Petiole twice as wide at the apex as long. Median area of the clypeus one-third longer than wide, the anterior margin without teeth. The distance between the posterior ocelli and the eyes is less than the length of the second joint of the flagellum. The latter is two-thirds longer than the third joint. Pygidial area rectangular, half as long again as wide.

C. tyrannica Smith. *Loc. cit.* p. 447, ♀.

“♀. Length 5 lines. Black and punctured; the face and a large spot behind the eyes yellow, the latter forming a tridentate shape above the antennae; the hinder margin of the vertex ferruginous, with two yellow spots in the middle; the mandibles yellow and also the scape in front; the antennae ferruginous, tips of the mandibles black. Thorax: the collar, sides of the thorax beneath the wings, the tegulae, scutellum, postscutellum and the sides of the metathorax, yellow; wings hyaline, the nervures ferruginous; the apical margins with a dark fuscous cloud; the legs ferruginous. Abdomen: a large ovate macula on each side of the segments, occupying nearly their entire width; the apical segment yellow; the space between the spots on the basal segment black; beneath ferruginous.

“*Hab.* The Gambia.”

The type is in the British Museum.

Except on the face, clypeus, and sternites, the puncturation is close and regular. On the sternites it is sparse and coarse. Median area of the clypeus flat, a little longer than wide in front, the anterior margin feebly trisinate. Pygidial area nearly twice as wide at the base as at the apex, longer than wide, the sides feebly convex, the apex transverse. The triangular area of the epinotum is closely punctured. Pygidial area longitudinally striate. Petiole twice as long as wide.

C. nenitroidea Bischoff. Schultze, "Forschungsreise in Süd-Afr.," *Jena. Denkschr.* xvii, p. 118, ♀, ♂. 1913.

"A small species, apparently very variable in colouring, related to *nenitra* and *spirans* Sauss., which it resembles considerably in colour.

"♀. Face, mandibles excepting the apex, scapes underneath, tegulae, metanotum, tibiae (excepting spots on the inner side), tarsi of all the legs but usually excepting the apical joint, a line on the inner side of the fore and middle femora, and apical bands, emarginate medially, on the third and fifth segments, whitish yellow. The antennae underneath are pale brown. Clypeus flat, transversely truncate in front, with a few long bristles on each side of the anterior margin. The frontal carina is fairly high and acute. The third antennal joint is only a little longer than the following. The distance between the outer margins of the hind ocelli is about equal to the length of the third joint of the flagellum. The puncturation on the face is coarse and confluent into longitudinal rugae. The vertex behind the ocelli is much more sparsely and somewhat more coarsely punctured. The spaces between the punctures on that part are smooth and shining. On the lower part of the face on the white areas there are some larger and irregularly spaced punctures which are not distinctly visible under the silvery pubescence. The rest of the head has a more or less erect grey to brownish pilosity. The wings are fairly hyaline, only slightly infuscated, and with a darker spot at the apex which extends as far as the radial cell. The first recurrent vein enters the second cubital cell distinctly before its middle. The hind tibiae have seven spiniferous serrations.... The first tergite is a little longer than wide. The puncturation on the first four tergites is even and fairly coarse. On the fifth it is finer. The pygidium is elongate oval, transversely truncate at the apex; the anterior half has a few large punctures and the whole of the posterior half is closely rugose. The sternites are much more sparingly and more finely punctured, and also shining. The fifth sternite in front of its apical margin is much swollen and coarsely rugoso-punctate. The hind margin of the swelling is slightly emarginate and ends on each side in a fairly large tubercle directed posteriorly.

"♂. Very much like the ♀. The face is black. A spot on the base and two spots on the posterior angles of the second segment are yellowish. The apical band on the fifth segment is reduced to a transverse bar in the middle. The sixth tergite is almost entirely yellow. The puncturation is very much like that of the ♀. The upper side of the epinotum is hardly more strongly punctured than the anterior parts of the thorax. The sides of the pygidium are more parallel. There are about fifteen large punctures on its upper side. The second sternite has a distinct longitudinal carina, barely indicated in the ♀. The penultimate sternite is not so strongly swollen and punctured as in the ♀, but also has a distinct and sharp tubercle on each side.

"Length, ♂ 8.5 mm.; ♀ *ca.* 9 mm.

"Kalahari, Severelele-Khakhea, October–November."

C. nasidens Schlett. *Zool. Jahrb.* II, p. 452, ♀, ♂. 1887.

“♀. 14 mm. long. Vertex fairly finely punctured, densely so in the middle, moderately densely at the sides. Median area of the clypeus not separated, about one and a half times as wide as its distance from the eyes, finely and sparsely punctured, very convex, produced into a distinct tooth in front. Inner orbits feebly divergent below. Second joint of the flagellum about twice, the third about one and a half times as long as the first. The distance between the posterior ocelli is hardly equal to the length of the second joint of the flagellum, their distance from the eyes equal to it. Mesonotum and scutellum fairly finely punctured, the mesonotum densely so in front, less densely behind, the scutellum is also less densely punctured. Triangular area of the epinotum finely punctured, moderately closely to sparsely so. Abdomen very finely and densely punctured above, shallowly and sparsely below. Petiole with a small swelling in front and an elongate fovea on the hind margin; a similar fovea, but less distinct, occurs on the following segments. All the sternites have a sharply angular impression which widens posteriorly. Pygidial area barrel-shaped, the lateral margins feebly fimbriated; the sixth sternite with a short pencil of hairs at the sides.

“♂. 13 mm. long. Median area of the clypeus moderately convex, oval, about one and a half times as wide as its distance from the eyes, finely and sparsely punctured, the anterior margin indistinctly dentate. Inner orbits distinctly divergent below. Mesonotum fairly closely and moderately finely punctured.

“Black. Face yellow. Antennae ferruginous, blackish towards the apex, the scape marked with yellow. The back of the head, pronotum, tegulae, mesopleurae, scutellum and metanotum are in greater part marked with yellow. Epinotum with large yellow spots at the sides. All the abdominal segments with wide, yellow bands. Legs ferruginous.

Var. obscura.

“Thorax black as far as the yellow or red pronotum and tegulae. Bands on the abdomen red, more or less narrowed in the middle. Legs dark ferruginous.”

Caffraria.

C. purpurea Schlett. *Loc. cit.* p. 453, ♂.

“♂. 11 mm. long. Vertex fairly coarsely and densely punctured. Median area of the clypeus very feebly convex, oval, about three times as wide as its distance from the eyes, coarsely and densely punctured, its anterior margin bluntly toothed. Inner orbits distinctly divergent below. Second joint of the flagellum fully twice, the third fully one and a half times as long as the first. The distance of the posterior ocelli from each other is equal to the length of the third joint of the flagellum, their distance from the eyes less than the length of the third but distinctly more than that of the first. Mesonotum and scutellum coarsely punctured, the former fairly closely, the latter closely to sparsely so. Triangular area of the epinotum irregularly and coarsely rugose. Abdomen in its anterior half fairly densely and coarsely punctured, in its posterior half sparsely so. The sternites with sparse and shallow puncturation. Wings entirely smoky, especially so at the apex of the fore wings.

“Black. Face and scapes yellow, the back of the head, pronotum and tegulae marked with yellow. The underside of the scapes, the abdomen and legs are ferruginous, but purplish red in life.”

Senegambia.

C. selifera Schlett. *Loc. cit.* p. 454, ♂.

“♂. 19 mm. long. Median area of the clypeus fairly strongly convex, elongate oval, twice as long as wide and in its upper part three times as wide as its distance from the eyes, its anterior half with an elongate impression, deeply and fairly closely punctured, the anterior margin not dentate. Inner orbits distinctly divergent below. Second joint of the flagellum about two and a half times, the third twice as long as the first. The distance of the posterior ocelli from each other is equal to the length of the second joint of the flagellum, their distance from the eyes equal to that of the third. Vertex and mesonotum fairly coarsely and densely, the scutellum less densely punctured. The pronotal collar has the anterior angles produced and is slightly depressed in the middle. Scutellum depressed in the middle, saddle-shaped. The triangular area of the epinotum is dull, owing to the very fine transverse striation. Abdomen coarsely and fairly closely punctured in front, less closely behind, shallowly and sparsely below. Wings smoky throughout, especially at the apex.

“Black. Face, a spot under the eyes, pronotum, tegulae, the second to seventh abdominal segments, yellow. Antennae, scutellum, metanotum, petiole and the legs, ferruginous. The hind tibiae blackish.”

East Africa.

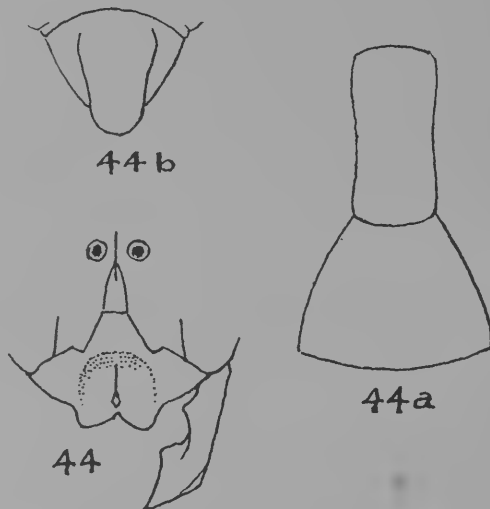


Fig. 44. *Cerceris albolineata* ♀, clypeus; a, first two tergites; b, pygidium.

C. albolineata Cameron (figs. 44, 44a and b). (*Trachypus*) Sjoestedt's *Kili-
mandjaro-Meru Exp.* VIII, p. 279, ♀. 1910.

♀. 11 mm. long. Black. Sides of the face below, clypeus, frontal carina, a small spot on the temples above, a line on each side of the pronotal collar, a spot on each side of the scutellum, metanotum, a spot on the mesopleurae under the tegulae, a V-shaped mark on each side of the epinotum posteriorly, a pyriform spot on each side of the base of the petiole, the base of the second tergite, the first sternite and the base of the second, pale yellow. Mandibles yellow, the apical third fusco-ferruginous. Antennae reddish brown below, blackish above. Legs dark brown, the outer side of the femora, excepting the hind pair, and the tibiae yellow, the anterior and middle tarsi dirty yellow, the coxae and trochanters more or less yellow. Wings hyaline, faintly fuscous,

darker on the radial cell. Median area of the clypeus slightly shining and almost smooth. Upper part of the face and the vertex at the sides reticulate-rugose and punctate, the temples aciculate, not very closely punctured. Pronotal collar rather sparsely punctured. Mesonotum and scutellum longitudinally rugose and punctured between the rugae, mesopleurae reticulate-rugose, metapleurae not transversely striated as in the majority of the species in this genus but very finely coriaceous. Metanotum shining, very finely and very sparsely punctured. Triangular area of the epinotum nitidulous, microscopically and transversely rugulose, not grooved down the middle, the rest of the epinotum fairly closely and strongly punctured.

Tergites dull, the second to fifth with a fine brownish pubescence, the petiole sparsely punctured, the second to fourth with a few large and scattered punctures on their apical halves. Sternites 2-3 shining, 4-6 dull, closely and finely punctured. Pygidial area three-fourths longer than wide at the base, narrowed towards the apex, closely and finely punctured over the basal half or more, the rest finely and closely rugose, the apical margin rounded. Mandibles with two teeth on the inner margin, the distal one rounded. Median area of the clypeus half as long again as wide, convex at the base, the anterior two-thirds concave, with a feeble median carina which ends in front in a blunt point; the apical margin excised in the middle and with the lateral angles prominent and rounded. Inner orbits almost parallel. Second joint of the flagellum about one-third longer than the third. The distance between the posterior ocelli and the eyes is equal to the length of the third joint of the flagellum. Mesopleurae without tubercles. Petiole long, nearly parallel-sided, twice as long as wide, longer than the second tergite. Posterior tibiae with five serrations on the upper margin.

♂. 10 mm. long. The yellow spots on the scutellum are larger than in the ♀, and the yellow on the legs is more extensive; otherwise like the ♀ in colour and sculpture. Median area of the clypeus convex, two-thirds longer than wide in front. Second joint of the flagellum barely longer than the third, the apical joint twice as long as wide at the base, obliquely truncate at the apex. Petiole two and a half times longer than wide. Pygidial area half as long again as wide, sparsely and finely punctured, the sides feebly convex, the apical margin transverse.

Kilimandjaro, Kibonoto; Bugoma Forest, Uganda (S. A. Neave).

C. erythrospila Cameron. *Ann. Trans. Mus.* 11, p. 148, ♂. 1910.

"Black; the underside of the antennal scape, a band on the apex of the third abdominal segment, narrowed in the middle, laterally occupying the half of the segment, and the sixth, except at the sides, yellow; the underside of the antennal flagellum, mandibles except the teeth, tegulae, the sides and the apex, more widely of the first abdominal segment, and the greater part of the four hinder coxae, rufous; the four front tibiae anteriorly and the tarsi pale yellow; the apical joints of the four anterior tarsi tinged with rufous; the hinder tarsi black, except the basal three-fourths of the basal joint; wings hyaline; the apex with a smoky violaceous cloud at the apex of the radius and more broadly beyond the apex of the third transverse cubital nervure; metanotal area strongly, longitudinally striated; pygidium strongly, irregularly punctured, the apex smooth, depressed. ♂. Length 8 mm.

"Face and clypeus densely covered with silvery pubescence; the rest of the head and the thorax densely covered with white hair; apex of the clypeus in the centre almost trilobate; the lateral lobes yellow; puncturation strong and close, except on the ventral surface of the abdomen, where it is fine and sparse,

the segments being also more or less aciculated; first abdominal segment three times longer than wide; the hypopygium widely incised, the lateral margins longish, triangular; there is a semicircular spot on the sides of the third ventral segment at the apex."

C. heterospila Cameron. *Loc. cit.* p. 148, ♂.

"Black; the clypeus, a broad line extending from shortly above the middle of the eyes to the mandibles, the antennal tubercle, basal half of the mandibles, a spot near the middle of the antennal scape, a transverse oval mark on the sides of the apex of the pronotum, tegulae, postscutellum, an irregular spot on the base of the second abdominal segment, a larger transverse one on the sides at the apex, the three forming a triangle, a band on the apex of the third, narrowed in the middle, broadly, roundly dilated laterally, the greater part of the sixth, the band rounded laterally, and a small spot on the sides of the second to fifth ventral segments, yellow; legs black; the greater part of the apical half of the fore femora, the apical fourth of the middle, and the tibiae and tarsi, lemon-yellow; the apical joints of the four front tarsi, and the apex of the basal joint of the hinder, rufous; the apical three-fourths of the second joint of the hinder tarsi and the whole of the others black; wings hyaline; the apex from the third transverse cubital nervure black; the stigma and nervures black; metanotal area rugosely reticulated, furrowed down the centre; the third to eighth and the apical joint of the antennae rufo-fulvous. Female. Length 8 mm.

"Strongly, closely punctured, densely covered with white pubescence; clypeus longish bell-shaped, transverse below, minutely tuberculate in the middle; first abdominal segment three times longer than wide; basal two-thirds of the pygidium strongly, deeply punctured, the punctures distinctly separated; following the punctures is an aciculated space, there being a row of punctures on the apex, which is transverse; the sides and apex are bordered by a depression. The spot on the base of the second abdominal segment may be absent, and there may be narrow, more or less narrow, lines on the sides of the fourth and fifth segments."

In vol. v, part 4, of these *Annals*, p. 239, the late Dr Brauns remarks of this species that there are three specimens in the Transvaal Museum's collection, two of which are labelled "type," and that all three are males.

C. basiornata Cameron. Sjoestedt's *Kilimandjaro-Meru Exp.* VIII, p. 273, ♂. 1910.

"Black, the first abdominal segment, the sides of the second above and beneath broadly (the black upper central part being triangular) and the pygidium, red; the clypeus, the face except above, its upper central part triangularly narrowed, so that the top is in three divisions, the apex of the third abdominal segment, narrowly in the centre, broadly on the sides, the sixth segment except at the base and the third ventral, red; antennal scape yellow below, the flagellum below and the apical joint entirely, brownish red; legs with the coxae black, the trochanters and femora red, the latter black below, the tibiae and tarsi yellow, the hind tibiae rufous below, the apical joints of the tarsi rufous. Wings hyaline, iridescent, the nervures and stigma black; the pedicle of the second cubital cellule half the length of the basal branch which is more roundly curved than the apical; the recurrent nervure is received near the apex of the basal fourth of the cellule. Metanotal area smooth, furrowed down the middle. ♂. Length 8 mm. Meru Rainforest, 3000 m. January.

"Last antennal joint bare, smooth, shining, slightly but distinctly dilated, the apex rounded. Head and thorax strongly punctured; the parts bordering the clypeus black except at the apex, which is rufous; the black parts covered with silvery pubescence. Abdominal petiole almost twice longer than wide. Pygidium coarsely, sparsely, irregularly punctured; its apex transverse, depressed behind; apex of hypopygium depressed, the sides roundly raised."

C. trichionota Cameron. *Loc. cit.* p. 275, ♂.

"Black, densely covered with longish white pubescence, the face, the lateral line produced upwards above the middle of the eyes, antennal keel, a line above it, rounded and widened above, gradually narrowed below, basal half of mandibles, palpi, a line on the outer orbits, extending to near their top, and obliquely projecting there towards the vertex, a broad line on the pronotum, divided in the middle by the furrow and obliquely narrowed on the outside, tegulae, a line on the basal half of the scutellum, the postscutellum, a broad mark on the sides of the metanotum (*i.e.* epinotum), the mark obliquely narrowed on the upper inner half, a mark on the upper basal half of the mesopleurae, narrowed to a point above, a small spot below it, followed by a line, reaching to the sternum, an irregular mark in the centre of the latter, a large mark on the apical half of the first abdominal segment, the mark dilated on the inner side at the base, from which it becomes gradually widened, broad bands, narrowly separated in the middle, gradually narrowed from the outer to the inner side, on the second, third, fourth and fifth, the lines becoming gradually narrower, a wider line, hardly narrowed in the centre; and broad lines on the apices of the second, third and fourth ventral segments, yellow; the last segment entirely, the greater part of the basal second, the third and fourth narrowly, before the yellow lines and the fifth and sixth ventral segments, rufous. Antennae and legs rufous, the tenth and eleventh antennal joints black, the hinder coxae, trochanters and base of the femora—their basal third—below yellow. Wings hyaline, the apex narrowly fuscous, the costa and stigma fulvous; the pedicle of the second cubital cell not quite so long as the posterior nervures which are roundly curved; the recurrent nervure is received near the apex of the basal fourth; the second recurrent at the same distance beyond the second transverse cubital nervure. Metanotal area strongly closely punctured like the rest of the metanotum.

"♂. Length 13 mm. Meru low lands, Ngare na nyuki. 25th November.

"The last joint of the antennae is roundly curved and is as long as the preceding two united and thinner than them. Apex of clypeus broadly, roundly curved, the sides fringed with golden hair; the clypeus and face weakly punctured, the upper part of the face more distinctly than the lower. Front, vertex and thorax closely, strongly punctured, as is also the abdomen. First abdominal segment is not much longer than it is wide at the apex; pygidium, except at the base and apex, strongly, but not closely punctured; apex of hypopygium roundly depressed."

It is to be regretted that the types of this species and of *pictinoda* and *basinornata* are not in the British Museum, as otherwise it would have been possible to provide new descriptions of these species. The tortuous phraseology, bad grammar and confused punctuation render Cameron's descriptions almost unintelligible in parts.

C. pictinoda Cameron. *Loc. cit.* p. 277, ♀.

"Black, a large bell-shaped mark (the narrowed end above) on the centre of the clypeus, a narrow line on the inner orbits, on lower half, antennal keel,

about the apical fourth of the third abdominal segment, and a narrow line on the apex of the fourth and fifth, pale yellow; the basal joint of the antennae entirely and the other joints, except above, the apical half of the first abdominal segment, the apex of the second narrowly, and the greater part of the apical second, red; as are also the greater part of the second, fourth and following ventral segments; the third has the greater part yellow. Legs red, the coxae, anterior trochanters and a broad line on the four anterior femora above, black; the four posterior trochanters for the greater part yellow. Metanotal area irregularly rugose, a finely closely punctured shallow furrow in the centre. Wings hyaline, the radial and cubital cellules smoky, the nervures black; second cubital cellule triangular, the pedicle short, not much longer than the space bounded by the second transverse cubital and the first recurrent nervure. Mandibles red, obscure yellow at the base, the teeth black. ♀. Length 7 mm. Kilimandjaro, Kibonoto, 1000-1300 m.

"Face, clypeus, pleurae, breast and ventral surface of abdomen covered with white pubescence. Front and vertex closely, strongly punctured, the face and clypeus as strongly but not so closely punctured. Thorax more strongly punctured, the propleurae more coarsely than the rest; the metanotum more strongly than the mesonotum; the meso- and meta-pleurae punctured like the mesonotum. Abdomen strongly punctured, the puncturation becoming wider towards the apex; the first segment twice longer than wide; the pygidium more strongly punctured than the penultimate segment, not much narrowed towards the apex; the hypopygium roundly, broadly incised."

C. amaura Kohl. *Ann. Soc. Ent. Belg.* xxxv, p. 16, ♀. 1891.

"♀. 12 mm. long. Vertex and back of the head very closely and fairly coarsely punctured. Face fairly finely rugosely punctured, more coarsely so below. Median area of the clypeus sessile, as wide as long, feebly convex, transversely truncate in front, covered all over with close coarse punctures which show a tendency to form rugae.... Third joint of the antennae twice as long as the second, the fourth hardly half as long again as the second. The distance between the posterior ocelli and the eyes equals the length of the second and third joints of the antennae, their distance from each other hardly less. Mesonotum fairly coarsely and very densely punctured, the scutellum coarsely and moderately closely, the metanotum much less coarsely and fairly closely punctured. Epinotum very closely and fairly coarsely punctured, the triangular area strongly and longitudinally striate and indistinctly punctured in the striae. Abdomen with a coarse, sharp and close puncturation; on the ventral surface, especially in the middle, with a shallower and sparser one. The pygidial area is of an elongate pyriform shape, irregularly rugose, towards the apex merely dull, with fairly strongly fimbriated sides; the hypopygium with large lateral tufts of hairs. Fifth sternite with a deep pit which is bounded by the bluntly bidentate and swollen hind margin. Wings slightly smoky, darker at the apex. Body black; the mandibles, excepting the black apex, ferruginous. Flagellum ochreous below, dark brown above, frontal carina pale yellow, tegulae partly ferruginous; petiole reddish at the margin, third and fifth segments with pale yellow apical bands. The tarsi and tibiae more or less pale yellow.

"Cap van Gèle, Congo."

C. mossambica Gribodo. *Mem. Accad. Sc. Bologna* (5), iv, p. 108, ♀. 1896.

"Of moderate size but robust, dull, rufo-testaceous. Basal margin of the clypeus distinctly triarculate, the sides of the face, frontal carina, a spot on the

base of the mandibles, posterior margin of the pronotum, a small vertical line below the tegulae, postscutellum, the first abdominal segment widely at the sides and on the apical margin, apical bands, dilated laterally, on the second and third (narrow on the second, wide on the third), very narrow apical bands on the fourth and fifth segments, almost obsolete or evanescent laterally, almost the whole of the first sternite, and lateral spots on the second, yellow; wings hyaline, somewhat yellowish in front of the stigma, slightly infuscated apically, the veins testaceous; head, thorax and pygidial area very closely and fairly evenly punctulate, the abdomen more sparsely but much more coarsely punctured, the spaces between the punctures microscopically sculptured (aciculate) and dull; triangular area of the epinotum longitudinally sulcate medially, obliquely and strongly striate on each side; head large, distinctly wider than the thorax, subcubical, the face much wider than high, transversely truncate below; clypeus narrow, elongate, transverse, slightly concave, the apical margin abruptly produced in the middle, sharply angulated on each side and feebly arcuately emarginate in the middle; abdomen one and a half times as long as the head and thorax united, subpetiole at the base, ovate and subcylindrical posteriorly; the first segment narrow, subquadrate and a little longer than wide, the remaining segments strongly constricted basally and apically, the third segment twice as wide as the first, the pygidial area subrectangular, truncate at the apex, unarmed, marginate at the sides, which are almost parallel. ♀, 14 mm. long."

Mosambique.

C. polychroma Gribodo. *Loc. cit.* p. 109, ♀.

"Of moderate size but robust, dull, pilosity sparse and grey, the abdomen subglabrous; head and thorax black; abdomen, legs and antennae rufo-ferruginous; face below the antennae and the mandibles, excepting the apex, yellowish white; the frontal carina pale yellow, antennae blackish above towards the apex, dorsum of the prothorax and the tegulae rufo-ferruginous; postscutellum with a transverse line of pale yellow; all the coxae and trochanters and the two posterior femora blackish on the inner side; the first and second tergites in the middle, the third and fourth at the base widely spotted with black (the spot on the petiole quadrate-rotundate, on the second transversely subrhomboidal, and on the third and fourth transverse and semilunate); the third and fourth slightly yellow on the apical margin; the band on the third dilated at the sides, on the fifth attenuate medially and laterally; wings subhyaline, the apex infuscated; head closely, finely and irregularly punctate-granulate, dull, the face on the pale yellow areas punctured and shining; clypeus simple, the base feebly arcuately convex, behind the margin widely transversely subsulcate, at the apex very slightly reflected as a small lamina, the margin very slightly arcuately excised; prothorax, like the head, very closely punctulate-granulate; mesothorax moderately and coarsely punctured, the intervening spaces dull (the pleurae very densely punctate-granulate, the postscutellum sparsely punctured); epinotum densely and coarsely punctured, the triangular area on each side at the base unevenly punctulate, posteriorly (the greater part) smooth and dull, longitudinally and deeply sulcate in the middle, the sulcus wide at the base, a little narrower apically, evenly and coarsely punctured; petiole quadrate (slightly convex at the sides), narrow; the rest of the abdomen robust, depressed-ovate, dull, coarsely and closely punctured; the segments impunctate and strongly constricted at the base; pygidial area (epipygium) with arcuate carinae, scutate, ... finely and very closely punctured; the sides of the area with two other carinae which with the

preceding ones form a transverse, subcrescentic and sulciform area; fifth sternite tuberculate on each side at the margin, the hypopygium narrowly, deeply emarginate at the apex, therefore almost bispinose. ♀.

"*Var. A.* Clypeus more or less widely margined with black; sometimes entirely black excepting two yellow spots.

"*Var. B.* Postscutellum black, with one spot.

"*Var. C.* Fifth tergite entirely yellowish white, or nearly so.

"*Var. D.* Fourth tergite, near the margin, more or less narrowly banded with yellowish white.

"*Var. E.* The last two or four tibiae more or less widely coloured yellow on the outside.

"Length 10-12 mm. Howick (Natal)."

C. speculata Shestakov. *Rev. Russe d'Entom.* xvi, p. 317, ♂. 1916.

"Distinguished especially by the shape of the petiole and the puncturation of the abdominal segments.

"♂. Clypeus quite round, the anterior margin tridentate, feebly sulcate lengthwise in the middle, villose and, like the face, moderately closely and finely punctured. Frontal carina long, almost reaching the anterior ocellus. Inner orbits nearly parallel. Vertex fairly densely punctured. Pronotum impressed above in the middle, roundly angular, subcarinate, more sparsely and more coarsely punctured than the mesonotum and vertex. Mesonotum closely and finely, the scutellum sparsely, punctured, the postscutellum punctured very finely and as sparsely as the scutellum. Mesopleurae without spines. Tegulae shining, with a few microscopic punctures. Wings fulvo-ferruginous, strongly infuscated at the apex. Epinotum more sparsely punctured than in other species, the punctures like those on the notum. Triangular area of the epinotum polished, very shining, with a very fine median longitudinal line.

"Abdominal segments: the first twice as long as wide, sparsely and finely punctured, with a small carina on each side of the anterior third, at that point feebly coarctate, the posterior margin with a fovea like the other segments; second sternite without a basal platform and like the rest fairly coarsely and closely rugoso-punctate at the sides, in the middle with sparse and fairly large punctures and also very small and close ones; the ventral segments polished, sparsely and finely punctured; the penultimate like the preceding ones but more strongly punctured, widely but not deeply emarginate, without spines, the posterior margin densely, the anterior less densely villose. Pygidial area narrower at the base than at the apex.

"Black. Face, clypeus, scape, spots behind the eyes, pronotum, tegulae, spots on the postscutellum, epinotum including the triangular area, marks, widely interrupted in the middle and extending over the whole length of the segment, on segments 1-6, and the first and second sternites, yellow. Mesopleurae with red maculae. Anterior legs fulvous, the others red; femora marked with fulvous. First three joints of the flagellum red, the rest red and infuscated above. 14 mm. long."

Senegal.

C. rufocincta Gerst. *Monatsb. Akad. Wiss. Berlin*, p. 510, ♀. 1857; Peters' *Reise n. Mossam.* p. 476, ♀. 1862.

"♀. 4.5 lin. long (ca. 9 mm.). Opaque black, closely punctured, with a slightly grey appearance due to the whitish pilosity. Face, almost up to the level of the antennae, yellowish white. Pubescence bright silvery. Clypeus flat, the frontal carina yellow and grooved; mandibles bright yellow, blackish

brown at the apex, the scape and underside of the flagellum ferruginous, blackish above. The puncturation on the top and back of the head is very close, almost rugose, the white pilosity particularly dense behind the eyes.

"The puncturation on the pro- and meso-notum consists of large and discrete punctures, on the scutellum, metanotum and triangular area of the epinotum of finer punctures; the sides of the epinotum are closely and very coarsely punctured; the spaces between the punctures aciculate and dull. The pronotum, shoulders and tegulae are fusco-ferruginous. The upper surface of the abdomen is slightly shining, coarsely reticulate-punctate; first segment narrow, not half so wide as the following segments and roundly quadrate. All the segments are ferruginous at the hind margin, the first two also at the sides, the first also in front and the last segment all over; on the third the reddish band is margined in front with yellow, and there is a spot of the same colour in the middle on the posterior margin of the penultimate segment. Legs ferruginous, the base of the coxae, a spot near the apex of the anterior femora, a line on the middle and hind femora posteriorly, and all the tibiae posteriorly, blackish brown; the base of the tarsi straw-yellow. The wings are hardly clouded, only the apex being brown, the costa and stigma deep black, the veins blackish brown."

Inhambane.

The description given above agrees fairly closely with the race *manicana* Arn. of *C. varicincta* Cam., which may eventually prove to be a synonym. However, in the absence of any information concerning the structure of the clypeus and pygidium in *rufocincta*, it would be unwise to assume the synonymy as proved.

C. picta Dahlbom. *Hymen. Eur.* 1, p. 222, ♀. 1845.

"♀. 3-4 lin. long (ca. 6-8 mm. long). With sericeous pubescence, shining, finely punctured, the head and thorax marked with black and orange-yellow; abdomen pale yellow, the dorsal segments with a triangular purplish brown mark at the base, the legs and antennae fulvous, wings hyaline, the apex widely infuscated, the triangular area of the epinotum polished and slightly convex, not sculptured; the clypeus with a lamina which is free and porrect, rectangular, slightly convex, declivous, its sides subparallel, its apical margin polished and truncate; the pygidium yellow, its dorsal area subrectangular, with the sides barely arcuate, widely truncate at the apex, dull and finely coriaceous, the sides of the pygidium shining and sparsely punctured.

"*Hab.* Senegal.

"In size and form like *C. nasuta* (i.e. *C. interrupta* Panzer) but somewhat more slender. Body shining, with sericeous pubescence, the punctures smaller and less deep than in other species. Face, frontal carina, cheeks and temples widely, the antennae, mandibles and two spots near the ocelli, yellow or orange-yellow; vertex, occiput, mentum, maxillae and apex of the mandibles, piceous or purplish black. Posterior margin of the pronotum gibbous and subtuberculate, yellow, the declivous anterior face slightly concave, sub-crescentic, marginate behind, rugose in front. Mesonotum, scutellum and postscutellum very sparsely punctured, the former somewhat flat and black, the latter subgibbous and yellowish; the tegulae of the same colour. Spots on the mesopleurae and large subovate spots on the sides of the epinotum yellowish or orange-yellow. Epinotum shining, sparsely punctured, black, in parts subviolaceous; the triangular area convex, very shining, with a fine median longitudinal line, otherwise without sculpture. Legs fulvous or

yellowish, the anterior coxae marked with black at the base, the posterior tibiae infuscated at the apex."

C. monocera Kohl. *Termes. Füzetek*, XXI, p. 341, ♀. 1898.

"♀. 10 mm. long. Black. The following parts are pale yellow: the lower part of the face, the mandibles excepting the dark apex, a small spot behind each eye, the scape, the collar above, a large round spot on each side of the scutellum, a large round spot on the mesopleurae below the wing-bases, the postscutellum, large lateral spots on the epinotum, apical bands on segments 2, 4, 5 and 6 (those on the fourth and sixth are fairly wide, but on the fifth much narrowed medially), a spot on each side of the third segment, large lateral spots on the second to fourth sternites, the legs, excepting the black coxae; the hind femora and tibiae are stained with brown behind. The flagellum is bright brown above, bright ochreous below....Wings smoky, the apical margin infuscated. The black parts, and also the yellow, are very shining in spite of the strong, and here and there fairly close, puncturation. The close puncturation on the mesopleurae is partly hidden by white pubescence. Face, vertex, temples and pronotal collar fairly closely punctured; mesonotum only moderately closely punctured, so that there are considerable smooth spaces between the punctures, especially on its disc; this applies also to the epinotum, with the exception of the triangular area which is quite smooth and shining. The puncturation of the abdomen is fairly dense above and coarse, coarser than on the thorax; the punctures, as on the head and thorax, are deep. The inner orbits are almost parallel. The upper part of the clypeus is produced into a nasiform, acutely conical protuberance, like that of *C. conigera* Dahlb.; the underside of this protuberance and the lower half of the median area of the clypeus are black and the anterior margin has a dentiform angle at each side. Frontal carina well developed. The second joint of the flagellum is about as long as the third, and a little shorter than the apical. The third is about one and a half times as long as wide at the apex, the sixth to the tenth are about as long as wide. Mesopleurae not tuberculate. Petiole hardly as long as wide. Pygidial area almost parallel-sided, a little more than twice as long as wide, the apex transverse. The penultimate sternite on each side has a sharp tooth at the posterior angles."

Senegal. Type in the Vienna Museum.

C. mirrata Bingham. *Ann. Mag. N.H.* (7), x, p. 215, ♂. 1902.

"♂. Clypeus and front to a little above the base of the antennae and the abdomen bright chrome-yellow; mandibles, antennae, the posterior half of the vertex, the occiput and upper half of the cheeks, the posterior half of the pronotum, the scutellum and postscutellum, an irregular mark on each side of the median segment at base with a round detached spot on the inner side of it, and the femora, tibiae and tarsi of the legs red, the red on the head and thorax dark, on the legs slightly yellowish; the rest of the head and thorax black, the wings fulvous yellow, the apex and apical margin fuscous, the tegulae fulvous red, the extreme base of the abdomen black. The head, thorax and abdomen coarsely punctured, the punctures on the head and thorax dense, those on the abdomen more sparse and scattered. The front of the head below the antennae and clypeus covered with a fairly abundant beautiful golden pubescence hiding the sculpture. Clypeus strongly convex in the middle, the sides anteriorly emarginate, the lateral angle laminate and produced, the head above and the cheeks broad, the occiput and cheeks posteriorly sharply truncate. Thorax narrower than the head; the scutellum and postscutellum

raised gibbous, the median segment convex, the cordiform space at the base with divergent oblique striae from a medial impressed line. Abdomen with the basal segment narrowed, forming a pedicel, which is convex above and twice as broad as long; pygidial area flat, margined at the sides, covered with coarse shallow punctures; hypopygium convex, with an apical short spine on each side. Length 10 mm. ♂.

“*Hab.* Collected at Middelberg (Distant), and one ♂ at Johannesburg (Ross).”

NEW SPECIES OF SPHEGIDAE, OTHER THAN *CERCERIS*, RECEIVED
SINCE THE PUBLICATION OF PART XIV OF THIS WORK

Mesopalarus Turneri n.sp.

♀. 10 mm. long. Very similar to *M. Mayri* Brauns, from which it differs as follows.

Abdomen ferruginous, the fifth segment fusco-ferruginous. Wings hyaline, tinged with yellow, the veins brown. Tegulae ochreous. Fore and middle femora and the tibiae on the outside, yellow; the rest of the legs reddish ochreous. The head is less closely, and the abdomen more finely punctured than in *Mayri*. The clypeus is produced in the middle and ends in three small teeth as in *Mayri*, but posteriorly there is no median carina. The middle is raised and ends in a Λ -shaped truncation. The eyes are less convergent above, the interocular distance on the vertex being equal to the length of the first nine joints of the flagellum. The second joint of the flagellum is not longer than the first. The posterior coxae are without a lamellar projection on the inner posterior angles. Otherwise like *Mayri*.

Aus, S.W. Africa, December, 1 ♀ (R. E. Turner). Type in the British Museum.

In Part iv of this work I treated *Mesopalarus* as a subgenus of *Paranysson*, but on account of the structure of the clypeus and the absence of a marginate triangular area on the epinotum it is worthy of generic rank.

Ampulex denticollis Cam., race *rufithorax* n.r.

♂. 8 mm. long. Clypeus, antennae, thorax, petiole and legs ferruginous, the femora above and the posterior metatarsi fuscous. Head and abdomen black, the extreme apex of the last segment ochreous. The sculpture of the head is sharper and larger than in the type of the species. Behind the ocelli it is obliquely rugulose with a sparse and fairly large puncturation superimposed. The pronotal collar has two teeth at about the middle, and is very coarsely reticulate in front of the teeth and a little behind them at the sides. The median longitudinal impression is present but is somewhat obscured by the reticulations. The median carina of the clypeus is higher and more acute than in the type of the species. The fundamental sculpture of the mesonotum and scutellum consists of a fine and very close puncturation, on which is superimposed a larger one, somewhat coarser than in *denticollis* i.sp. The mesonotum is longer, being about three-fourths wider in front than long in the middle (twice as wide as long in the type of the species). The transverse rugae between the longitudinal carinae of the epinotum are smaller and more plentiful. Otherwise like the type of the species.

Aus, S.W. Africa, January, 1 ♂ (R. E. Turner). Type in the British Museum.

Arpactus mimicus n.sp. (figs. 45 and 45 a).

♂. 9 mm. long. Black. A small triangular spot adjacent to the inner orbits and opposite the antennal sockets, an apical band on the first tergite, another narrow one slightly widened medially on the second tergite, the apical half of the third tergite and the whole of the fourth, fifth and sixth tergites, lemon-yellow. Seventh tergite ochreous, blackish at the margins. Antennae dark brown above, ochreous below. Mandibles, anterior pair of legs and the fore and middle tarsi, fusco-ferruginous. Wings hyaline, the radial, second cubital, distal third of the second discoidal, second submedial and the distal upper angle of the medial cells, violaceous brown. Face and clypeus with a fine grey pubescence, the tergites with a pruinose bloom. Face and clypeus dull, very finely punctured. On the upper part of the face and on the vertex there is in addition a larger, but fine and sparse, puncturation. Temples shining, marginate below, very finely punctured. Thorax dull, the scutellum and metanotum slightly shining. Pronotum transversely striate at the sides, the dorsal face very short and sharply marginate in front. Mesonotum, scutellum and metanotum strongly and fairly closely punctured, the scutellum with short longitudinal striae in front. Mesopleurae closely reticulate rugose

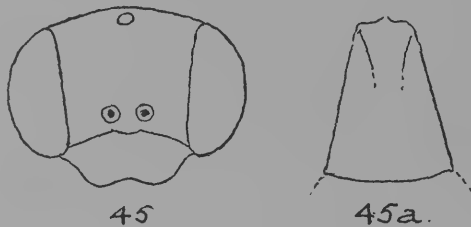


Fig. 45. *Arpactus mimicus* ♂, head; a, first tergite.

and punctured. Metapleurae obliquely striate above, almost smooth below. Triangular area of the epinotum nearly twice as wide at the base as long, evenly, closely and obliquely rugose, the rugae attenuated posteriorly; the rest of the epinotum is closely and fairly finely reticulate rugose. Abdomen dull, microscopically and closely punctured, the first two tergites also with a sparse and larger puncturation in addition, composed of small and very shallow punctures. Inner orbits almost parallel, very slightly convergent below. Clypeus fairly short, shorter than the scape, the anterior margin slightly concave. Antennae long and slender, all the joints, except the first, longer than wide. The second joint of the flagellum is four and a half times longer than wide and one-third longer than the third. Interocular distance on the vertex equal to the length of the first three joints of the flagellum. First tergite subconical, twice as wide at the apex as at the base, about one-third longer than wide at the apex.

Aus, S.W. Africa, January, 2 ♂♂ (R. E. Turner). Type in the British Museum.

The long antennae and the fuscous clouds on the wings make this insect resemble some of the species of the genus *Pseudagenia*.

NEW SPECIES OF ETHIOPIAN SPHEGIDAE DESCRIBED BY OTHER AUTHORS
AND PUBLISHED SINCE THE ISSUE OF PART XI OF THIS WORK

Sphex bechuana Turner. *Ann. Mag. N.H.* (10), IV, p. 554, ♀. 1929.

“♀. 24 mm. long. Black; mandibles, apex of the clypeus, scape, prothorax, tegulae, petiole underneath, second abdominal segment, fore and middle coxae, fore and middle femora (the basal half infuscated), tibiae (the apical half of the posterior pair infuscated), ferruginous;...wings fusco-hyaline.

“Clypeus at the base and sides sparsely clothed with long pale fulvous hairs, the median portion shining, with a few large punctures, the anterior margin straight. Head coriaceous, with large scattered punctures, clothed with delicate silver pubescence. Inner margin of the eyes slightly convergent above. Pronotum long, almost half as long as its median breadth, very strongly transversely striated, margined anteriorly, the striae numbering five or six, more or less interrupted in the middle, the space between the striae shining. Mesonotum strongly transversely striated, the striae interrupted in the middle by a very deep longitudinal sulcus, which becomes subobsolete posteriorly, the space between the striae shining; scutellum and metanotum strongly longitudinally striated. Median segment dull, closely transversely striated. First joint of the petiole as long as the hind femur. Claws unarmed, but with a distinct pulvillus. Second cubital cell three-quarters as long on the radius as on the cubitus; third cubital cell a little longer on the cubitus than on the radius; second transverse cubital nervure straight, third strongly curved outwardly.

“*Hab.* Ghanzi, Mongalatsila, N. Bechuanaland, January (J. Maurice).

“Easily distinguished from *S. Braunsi* Turn. by the much coarser sculpture of the pronotum and mesonotum, the striae in *Braunsi* being much closer together and less elevated; the pronotum is also distinctly shorter than in *Braunsi*.”

Sphex insignis Smith. Turner, *loc. cit.* p. 555.

Turner points out that *S. (Ammophila) egregia* Mocs. is identical with Smith's species, so that *egregia* sinks in synonymy.

Thyreopus (Neodasyproctus) basutorum Turner. *Loc. cit.* p. 555, ♀.

“♀. 9 mm. long. Black, shining; scape, an interrupted line on the pronotum, spots on each side of the second to fifth tergites, fore and middle tibiae above, yellow; anterior tarsi pale ferruginous; anterior tibiae fusco-ferruginous below, the calcaria whitish; wings pale fusco-hyaline, iridescent, the veins black.

“Clypeus densely clothed with silver pubescence, with a low carina from the base to near the apex, where it branches into two, forming a small, margined, triangular area, the angles of which are produced and form two small teeth on the anterior margin. Second joint of the flagellum fully half as long again as the first, a little shorter than the third, and only about half as long again as its apical breadth. Scape without a carina in front, the facial concavity rather shallow and not marginate above. Front closely and rather strongly punctured, more or less reticulate above the facial concavity, vertex much more finely and sparsely punctured, the space behind the eyes and temples almost smooth. Posterior ocelli a little farther from the eyes than from each other. Pronotal collar with a distinct depression in the middle, interrupting the marginal carinae; the space between the carinae forming the

anterior and posterior margins flat, not elevated as in *Kohli*. Mesonotum strongly, but rather sparsely punctured; mesopleurae smooth and shining; scutellum sparsely punctured anteriorly, the posterior portion clothed with close-lying hairs giving the appearance of longitudinal striolation; metanotum opaque. Median segment rather finely punctured, with a transverse clathrate groove at the base and a smooth median groove from the base to apex; the median area distinctly defined. Abdomen smooth and shining, the puncturation microscopic. Petiole nearly half as long again as the second tergite, only feebly clavate. Hind tibiae with a row of five small teeth on the outer margin.

“*Hab.* Van Reenen, Natal, 6000 ft., January, 1 ♀ (Turner).

“This species is very distinct from *Kohli* Arn., the only species of the group hitherto described; differing from it in the much finer sculpture, which does not obscure the basal area of the median segment, in the smooth mesopleurae, and in the bidentate clypeus as well as in other details; but agrees with it in the neuration, the tridentate mandibles, and in other subgeneric characters.”

Tachytes calvus Turner. *Loc. cit.* p. 556, ♀.

“♀. 11 mm. long. Black; abdomen rufo-ferruginous, pygidial area clothed with golden pubescence; the two apical joints of the tarsi brownish ferruginous; wings hyaline, the veins fusco-ferruginous. Interocular distance on the vertex equal to the length of the second joint of the flagellum; galea shorter than the scape. Head and thorax closely and minutely punctured, almost without pubescence, the mesonotum and vertex entirely bare. Median segment without pubescence, the declivity transversely striate, the dorsal surface finely and irregularly obliquely striated. Second sternite closely and microscopically punctured, shining. Tergites without apical bands of pubescence. Pygidial area elongate, narrowly rounded at the apex. Anterior metatarsus with five spines.

“*Hab.* Okahandja, S.W. Africa, February, 2 ♀♀ (Turner).

“This may possibly prove to be a dwarf race of *T. Sjoestedti* Cam., agreeing in most structural characters with the race *formosa* Arn., but differing in the entirely red abdomen, in the absence of pilosity, and much reduced pubescence; also, apparently in the sculpture of the dorsal surface of the median segment.”

Miscophus deserticolus Turner. *Loc. cit.* p. 557, ♀.

“♀. 5 mm. long. Black, shining; base of the mandibles, tibiae and tarsi brownish ferruginous; clypeus and pleurae with silver pubescence; wings hyaline, the veins black, the tegulae fuscous. Clypeus opaque, closely and finely punctured, the apical margin transverse, very feebly convex, and without a carina. Head, thorax and median segment shining; mesopleurae opaque, coriaceous, sides of the median segment with a few delicate striae; head and mesonotum with a few microscopic punctures; abdomen smooth and shining. Front slightly concave as far from the base of the antennae as the length of the scape, the concave area sharply transversely divided above from the rest of the head, but without a distinct marginal carina. Ocelli in an equilateral triangle, the posterior pair much nearer to the eyes than to each other. Eyes separated on the vertex by a distance a little greater than the length of the first and second joints of the flagellum combined, diverging considerably towards the clypeus. First joint of the flagellum very little longer than wide, second a little longer than the third and more than twice as long as the first. Pronotum more than two-thirds as long as the mesonotum, narrowed an-

teriorly and microscopically transversely striate, the dorsum of the median segment with similar sculpture. First abdominal segment narrow and petiole, half as long as the thorax and median segment combined, the petiole as long as the gradually broadened apical portion of the segment. Legs long and slender, no comb on the anterior tarsus, hind metatarsus shorter than the tibia by one-fifth and as long as the rest of the tarsus. First recurrent nervure received considerably before the middle of the first cubital cell, second at the middle of the second cubital cell. Petiole of the second cubital cell very short, almost obsolete, the cell triangular, the outer side incomplete near the cubitus.

"*Hab.* Swakopmund, S.W. Africa, April (Turner).

"In the long pronotum this resembles *M. cyanescens* Turner, but is very distinct in colour, in the shining surface, the long petiole, and other details."

Miscophus Arnoldi Turner. *Loc. cit.* p. 558, ♂.

"♂. 3.5 mm. long. Black, dull; mandibles fusco-ferruginous; the first two tergites and first three sternites rufo-ferruginous; wings hyaline, the veins fuscous, tegulae brown; second cubital cell very small, subobliterated.

"Clypeus convex, slightly produced in the middle of the anterior margin. Head and thorax closely and finely reticulate-punctate, with sparse silver pubescence, which is absent on the vertex and mesonotum. Ocelli in a rather wide triangle, the posterior pair farther from each other than from the anterior, and separated from the eyes by a distance equal to about one and a half times their own diameter. Eyes only slightly convergent towards the vertex, interocular distance equal to the combined length of the three basal joints of the flagellum plus half the fourth. First joint of the flagellum longer than broad, a little more than half as long as the second. Collar of the pronotum very short; median segment narrowed posteriorly, a little shorter than the mesonotum, the sculpture similar to that of the thorax, but a little coarse, with a longitudinal groove. Abdomen subsessile; microscopically punctured, the first tergite slightly constricted at the apex. Second cubital cell almost obsolete, first recurrent nervure received just beyond the middle of the first cubital cell.

"*Hab.* Matjesfontein, Cape Province, November, 1 ♂ (Turner).

"In sculpture this resembles *M. Kriechbaumeri* Brauns, but is without the golden scales characteristic of that species, the pronotum is also much shorter, and the first tergite is not constricted in *Kriechbaumeri*. The subobsolete second cubital cell is a unique character."

In the *Proceedings of the United States National Museum*, LXXV, Art. 5, pp. 1-203, Prof. J. B. Parker has described as new eighteen species of *Bembex* from the Ethiopian Region. As that paper was published while Part XIV of this monograph was in the press, some of the species described by me sink in synonymy. These are, *B. speciosa* which is a synonym of *regnata* Parker, and *B. albopilosa* which is a synonym of *albata* Parker. On the other hand, as is clearly shown by the figures of the genitalia given in Parker's work, several of his names must be sunk in synonymy. These are indicated farther on.

The descriptions of the other species are transcribed hereunder.

B. regia Parker (fig. 46). *Loc. cit.* p. 68, ♂, ♀.

"Type, ♂. Black: labrum except median stripe; mandibles except tips; narrow apical border and lateral spots on clypeus; small spots on scape below; small round spot on either side of anterior ocellus; minute spot between antennae; posterior orbits broad below, narrow above; posterior border of pronotum; sides of prothorax almost entirely; narrow lateral line on

scutum above base of wings; curved, interrupted fascia on posterior border of scutellum; interrupted fascia on metanotum; curved fascia on propodeum (= epinotum), broadest on posterior surface; lateral angles and almost entire sides of propodeum; large spot on metapleura; mesopleura and mesosternum almost wholly; widely separated lateral spots on first tergite, broad at lateral end and narrowed to a point at dorsal end; continuous fasciae on tergites 2-4, that on second almost enclosing a pair of discal spots, those on third and fourth biemarginate on anterior border; lateral spots on tergites 5 and 6; lateral spots on sternites 2-5; legs except black line above on anterior femora, black line below and broken line above on anterior tibiae, black spot above at base of the other tibiae and black spot below on each segment of anterior and middle tarsi: *yellow*. On some parts of the body the yellow has a greenish tinge and the dorsal part of the tergal fasciae is pale.

"The antennae are stout, the scape being unusually thick and heavy. Segments 9-11 of the flagellum are broadened and flattened below but are not much excavated, the surface being only slightly concave. The apical segment is rounded, slightly curved and truncate at the apex. The spines of the anterior metatarsus, of which one bears seven and the other six, are peculiar in form, most of them, but not all, being broad, flat and stout. The intermediate femora are dentate, each bearing at the base a single stout spine and apical to this a series of very small spines. The middle tibia on the inner side shows a slight swelling at the apical end.

"The middle metatarsus is strongly curved and compressed. Below at its proximal end is a slight protuberance covered with fine stiff hairs, and the anterior border at the apical end is developed into a broad, thin wedge-like process. This is true also of the second segment, and to a less degree of the third. The second sternite bears a prominent carina and the sixth a very narrow median process, whose ventral surface is concave and whose apex resembles a carina. It does not reach the apex of the sternite. The seventh sternite bears a median carina. The sides of the seventh tergite are gently sinuate and the apex is broad and round. Lateral ridges are present but not at all prominent. The eighth sternite ends in a relatively short, curved hirsute spine that, near its middle, is much dilated along its dorsal margin.

"Allotype, ♀. Black: narrow dorsal border and broader lateral borders of labrum; very narrow border and narrow lateral stripe on clypeus; pair of small spots between antennae; pair of rounded spots near anterior ocellus; trace of anterior orbits opposite antennae; posterior orbits broad below, narrowed and shortened above; posterior border of pronotum; side of prothorax, except large lateral spot that covers much of the tubercle; narrow lateral lines and narrow, transverse discal line on scutum; narrow fascia on posterior border of scutellum; narrow fascia on posterior border of metanotum; curved fascia of propodeum, widened and interrupted on its posterior surface; spot on posterior lateral angles extended to form an interrupted fascia on ventral part of posterior surface of propodeum; vertical anterior stripe on side of propodeum; metapleura almost entirely; triangular spot with longer leg vertical and shorter leg longitudinal on mesopleura; widely separated lateral spots on first tergite; fascia on second tergite, notched at midline on anterior border, broadly emarginate on median posterior dorsal border, and enclosing a pair of elliptical black spots; fascia on third tergite similar to that on the second but with emarginations representing the discal spots; narrow, interrupted fascia on fourth tergite; small widely separated spots on fifth; small lateral spots on sternites 2-4; line above and below on femora; tibiae, except black line above and below; and tarsi, except black spot below on anterior metatarsus; *yellow*.

"The flagellum is black with a fuscous line below on all segments. The wings are slightly and uniformly infumated. The anterior metatarsus bears six broad, black spines whose dorsal surface is concave. The disc of the second sternite is smooth and shining and bears coarse scattered punctures. The sixth tergite is roundly triangular at the apex and is densely punctate except at the extreme posterior end. The labrum bears a distinct longitudinal carina that broadens near the apex where it is distinctly grooved.

"The paratype differs but slightly from the allotype; the clypeus, frons, and labrum have less yellow on them and the carina of the labrum is less conspicuous at the base.

"Length 17 mm. Described from a ♂ bearing the label 'Neu Kamerum, Tessmann S.S.,' and two ♀♀ with the label 'Leubo Congo, D. W. Snyder.'

"Type in the Zool. Mus. der Universität, Berlin. Allotype in the U.S. Nat. Mus."

Apparently related to *anomalipes* Arn. but the genitalia are different, and also the structure of the anterior tarsi and the middle femora and tibiae.

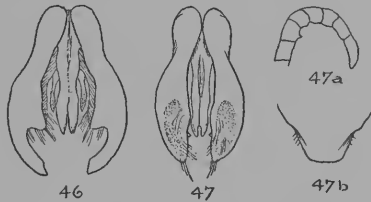


Fig. 46. *Bembex regia* ♂, genitalia (after Parker).

Fig. 47. *Bembex loupata* ♂, ♀♀, genitalia; a, ♂, apical joints of the flagellum; b, ♂, seventh tergite (after Parker).

B. loupata Parker (figs. 47, 47a and b). *Loc. cit.* p. 73, ♂, ♀.

"Type, ♂. Black: labrum; mandibles, except tips; clypeus, except pair of small black spots; frons between antennae; pair of small spots on frons near anterior ocellus; scape below; broad but short anterior orbits; posterior orbits narrowed above; posterior border of pronotum; side of prothorax, except black spot that includes most of the tubercle; small lateral spot on scutum above base of wings; fascia on scutellum reduced to narrow widely separated lines; narrow elongated spot on mesopleura; fascia on first tergite interrupted and parts narrowed to a point at mid-dorsal line; fascia on second broad laterally, widely, and deeply emarginate (the emarginations prolonged to right and left) and acutely notched on anterior border and slightly emarginate at midline on posterior border; fasciae on third and fourth tergites similar to that on second but with emarginations less pronounced; that on fifth tergite broad and only slightly interrupted at midline; that on sixth also broad and almost interrupted at midline; lateral spots on sternites 2-6 connected by apical lines, except those on sternite 6; femora, except above and below basally; tibiae, except spot on anterior pair and basally above on all; and tarsi; pale with a tinge of yellow on the labrum and on the lateral portions of the tergal fasciae. The anterior part of the apical lines connecting the lateral sternal spots is tinged with ferruginous. The flagellum is dark above, lighter below, and at the apex takes on a ferruginous appearance. Segments 9, 10 and 11 are slightly excavated below, and 7 and 8 are spinose. The ultimate segment is slightly curved, somewhat flattened and pointed at the apex. The middle femur below is beset with several sharp-pointed teeth that are longest near the apex of the femur, which on its posterior surface

bears a distinct longitudinal depression or groove. The second sternite bears a long, low, thin carina-like process that ends in a blunt point. The sixth sternite is peculiar in that it bears a median triangular swelling that cannot be termed a process, since its apical part slopes smoothly to the apical margin of the sternite, which shows a slight median apical emargination. The seventh sternite shows a prominent median carina and is distinctly notched at the apex. The seventh tergite on either side bears a distinct lateral ridge with an emargination producing a lateral angle and bears within this angle several short spine-like hairs. The apex of the tergite is relatively broad and roundly truncate.

"Allotype, ♀. Black: labrum; mandibles, except tips; apical border of clypeus; spots on frons; scape and flagellum below; anterior and posterior orbits; apex of sixth tergite; sixth sternite; fasciae joining lateral spots on sternites; legs, except basal segments and more or less of the basal part of all femora; *ferruginous*. Narrow line on posterior border of pronotum; posterior part of tubercle; narrow fasciae on posterior border of scutellum; narrow fascia on metanotum; narrow abbreviated fascia on propodeum; small spot on lateral angles of propodeum; continuous fasciae on tergites 1-5; first narrowed medially; second enclosing pair of dorsal black spots; third, fourth and fifth biemarginate on anterior dorsal border and acutely sinuate at midline on posterior border; and lateral spots on sternites; *pale*. Traces of yellow are seen on the labrum, on the extreme lateral portions of the tergal fasciae and on the tibiae. The sixth sternite is carinate on the midline and the sixth tergite, which is narrow and rounded at the apex, is covered with spine-like hairs very prominent laterally at the base.

"Length 14-16 mm. Described from three specimens. The type and allotype bear the label 'Deutsch Ost Afrika, Kanoga, Fr. Müller S.' A second female, which I have referred to this species, bears the label, 'Victoria Nyansa, I. Ukerewe, Conrads S.G.' This differs from the allotype in having the labrum light yellow, the abdominal fasciae brighter with a creamy yellowish tinge. The ferruginous fasciae connecting the lateral sternal spots are much obscured and the propodeum is wholly black."

Type in the Zool. Mus., Berlin.

B. recurva Parker. *Loc. cit.* p. 76, ♂, ♀.

Described from three ♂♂ and one ♀. The coloration is variable, and taking this into account and making allowances for slight differences in the interpretation of the structure of the antennae, it is probable that it is a synonym of *ugandensis* Turner. Parker says that the seventh joint of the flagellum is spinose, like the eighth and ninth, whereas in *ugandensis* it appeared to be only angular in the middle. The figure of the genitalia given by Parker agrees well with *ugandensis*, bearing in mind that it has been drawn at a slightly different angle. Until the types of the two can be compared, it is perhaps best to treat *recurva* Parker as a synonym. The specimens described by Parker come from the Cameroons, so that the species appears to be widely distributed over the equatorial forest zone of Central Africa.

B. levis Parker. *Loc. cit.* p. 78, ♂, ♀.

"Type, ♂. Black: labrum; mandibles, except tips; clypeus, except a pair of elliptical spots; scape below; spot between and above antennae; broad anterior orbits shortened above; posterior orbits narrowed above; posterior dorsal border of prothorax; sides of prothorax almost entirely; spot on tegula; narrow line on scutum above tegula; curved fascia on posterior border of

scutellum; narrow fascia on posterior border of metanotum; broken fascia on dorsum of propodeum; lateral angles and spot on sides of propodeum; narrow line on metapleura; large spot almost divided into two on mesopleura; continuous fasciae on tergites 1-5, first deeply sinuate on anterior median margin, second enclosing almost completely a pair of dorsal black spots and emarginate on posterior median border, remainder bisinuate on anterior border and emarginate on posterior median border; obscure spots on tergite 6; lateral spots on sternites 2-4; spot on coxae; femora in greater part; tibiae, except lines below and on posterior border; tarsi, except terminal segment of each; white with a slight tinge of creamy yellow in some places.

"The flagellum is black and segment 7 is bluntly but quite evidently spinose. Segments 9-11 are slightly excavated and segment 12 is flattened, distinctly curved, and roundly truncate at the apex, which is ferruginous in colour. The intermediate femora are not considered serrate or dentate, although the apical end of the posterior border is slightly roughened. The middle tibiae and tarsi are normal. The anterior metatarsus bears six spines. The second sternite (on the type) bears an evident median carina that does not end in a process or spine. The second sternite of the male paratype bears a large, curved, sharply pointed process whose ventral surface is slightly concave. The seventh sternite is carinate on midline. The seventh tergite is deeply sinuate on either side apically, causing the tergite to end in a blunt point.

"The allotype, ♀, though resembling the type closely, differs in maculations as follows: the labrum and clypeus are black, except narrow lateral borders; the scape is wholly black; spot at the insertion of antennae is much reduced; the scutum bears a broken U-shaped discal mark; the fascia on the propodeum is complete; the fascia on the second tergite (and probably that on the third, which is much retracted) bears a pair of completely inclosed discal spots; fascia on the fifth tergite is interrupted at midline; the spots on the sides of the thorax and propodeum are better developed; and the colour in general is slightly more yellowish.

"The wings in both sexes are hyaline and relatively long. The pubescence is short, white and sparse. The disc of the second sternite of the female is shining and bears numerous coarse punctures, on three of the female paratypes the fascia on the fifth tergite is continuous, and on two the scutum bears only the transverse discal mark. On some the fascia on the third tergite incloses a pair of black discal marks. Length 15 mm."

From various localities in the Cameroons and one ♂ from the Belgian Congo. Type in the Zool. Mus., Berlin.

Very closely related to *modesta* Hndl. if not identical with that species.

B. opinabilis Parker. *Loc. cit.* p. 79, ♂, ♀.

After a careful consideration of the description of this species, I am forced to the conclusion that Parker's name must be sunk in synonymy to *Stadelmanni* Hndl. Both come from East Africa, and the figures in Parker's work of the seventh tergite and the genitalia agree very well with those in Handlirsch's monograph. Slight differences of colour are of very little account in this genus, and the spinosity of the flagellum and the femora is subject to some degree of variation within the species.

B. tenuifasciata Parker (figs. 48 and 48a). *Loc. cit.* p. 82, ♂, ♀.

"Type, ♂. Black: labrum; mandibles, except tips; clypeus, except pair of large basal spots; scape below; spot between antennae; very short, broad

anterior orbits; posterior orbits, very broad below, narrowed to a point and not reaching vertex above; posterior border of pronotum; side of prothorax and posterior half of tubercle; curved fascia on posterior part of scutellum continued forward laterally on scutum at base of wings, and narrowed and interrupted on midline; narrow interrupted fascia on metanotum; curved fascia on propodeum, broadest on posterior surface; lateral angle and almost the whole side of the propodeum; large spot on metapleura; large triangular spot on mesopleura; narrow interrupted fasciae on tergites 1-6, the first more widely interrupted than the others, all of which are bisinuate dorsally on the anterior margin, and second, third and fourth are slightly sinuate laterally on posterior margin; continuous fasciae on posterior border of sternites 2-5; minute lateral spots on sternite 6; legs, except black lines on all femora and tibiae, and the black terminal segment of all tarsi; *yellow*.

"The flagellum is black. The tenth, eleventh and twelfth segments are excavated below but none are spinose. The middle femora are plain. The apical segment of each tarsus is black, and the other segments of the tarsi show a greater or less degree of dark colour below. The second sternite is plain and the sixth shows a moderate transverse swelling or elevation not sufficiently prominent to be called a process or tubercle. The seventh tergite at its base bears lateral spines similar to those borne by *bidentata*.

"The allotype, ♀, in colour and character of the maculations is almost exactly like the type. It differs in that the pair of small lateral spots on the scutum at the base of the wings are more prominent; the fasciae on tergites 2 and 4 are continuous and the one on the fifth tergite is more widely interrupted than the one on the first; and the tarsi do not show the black markings seen on the type. The wings in this species are slightly and uniformly infumated. The pubescence is short and relatively sparse. The anterior metatarsus is provided with seven spines. The disc of the second sternite of the female is smooth and shining and bears numerous coarse punctures, and the sixth is carinate on midline.

"Length 16 mm. Described from two specimens, one ♂ and one ♀, each of which bears the label, 'W. Afrika, Lagos, Coll. Bingham.'

"Type in the Zool. Mus., Berlin."

Evidently very closely related to *B. Scotti* Turner, but in that species the wings are clear hyaline and the sixth and seventh, and ninth to eleventh joints of the flagellum are differently constructed.

B. tenebrosa Parker. *Loc. cit.* p. 90, ♂, ♀.

The genitalia are not figured for this species, but the detailed account of the structure of the antennae and legs, especially the depression between two black spots on the underside of the anterior tibiae near the apex, which I omitted to mention in my description of *diversipennis* Smith ♂, leaves no doubt that *tenebrosa* must sink as a synonym of *diversipennis*, var. *Johnstoni* Turner. I wrongly treated *Johnstoni* as identical with the type; it is valid as a variety, in which the abdomen is without yellow bands or spots.

B. Stevensoni Parker. *Loc. cit.* p. 92, ♂, ♀.

The figures of the genitalia and other parts make it quite clear that Parker is here dealing with the clear-winged variety of *fuscipennis* Lep. The wings in the ♂ of *fuscipennis* show varying degrees of infuscation, so that *Stevensoni* can hardly stand even as a varietal name.

B. refuscata Parker. *Loc. cit.* p. 94, ♂, ♀.

The figures of the genitalia and other parts and also the description make it evident that this name must be sunk as another synonym of *diversipennis* Smith.

B. alacris Parker (figs. 49, 49a and b). *Loc. cit.* p. 99, ♂.

"Type, ♂. Black; mandibles, except tips; pair of small spots below anterior ocellus; narrow posterior orbits; narrow line on posterior border of pronotum uniting small lateral spots; spot on side of prothorax extending to posterior border of tubercle; lateral spot on scutum at base of wings; narrow fascia on posterior border of scutellum; narrow, broken fascia on metanotum; pair of spots on posterior surface of propodeum; spot on side of propodeum; spot on metapleura; fascia on first tergite, narrowed and interrupted at dorsal midline; broad fascia on second, inclosing a pair of dorsal elliptical spots and narrowed at dorsal midline; broad fascia on tergites 3, 4 and 5, biemarginate on anterior border and sinuate at midline on posterior border; fascia on sixth tergite; lateral spots on sternites 2-5; femora in part; tibiae, except below on all; and tarsi, except lower surface of anterior pair; yellow.

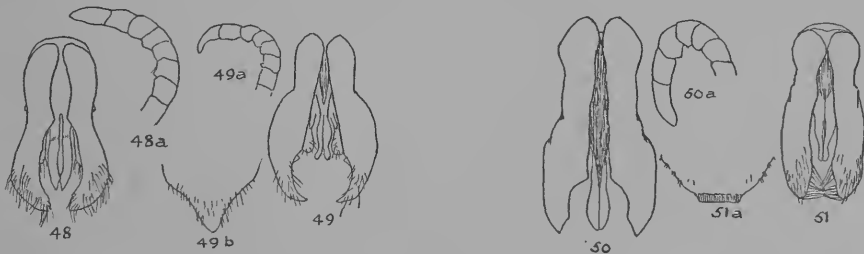


Fig. 48. *Bembex tenuifasciata* ♂, genitalia; a, apical joints of the flagellum (after Parker).

Fig. 49. *Bembex alacris* ♂, genitalia; a, apical joints of the flagellum; b, seventh tergite (after Parker).

Fig. 50. *Bembex liberiensis* ♂, genitalia; a, apical joints of flagellum (after Parker).

Fig. 51. *Bembex agrestis* ♂, genitalia; a, seventh tergite (after Parker).

The wings are hyaline; the antennae are black, the scape being very thick and heavy. Of the flagellum, segments 6, 7, 8, and to a slight extent 9, are spinose, and segments 9, 10 and 11 are excavated below. The ultimate segment is strongly curved, flattened and pointed at the apex, which is very light in colour. The middle femora are dentate, the teeth, five in number, being limited to the apical half of the femur. The second sternite bears a well-developed median carina, and the sixth a conspicuous median swelling which cannot be properly called a tubercle or process. The frons between the antennae is carinate and the eye-margins are approximately parallel. The anterior metatarsus is provided with six spines, which are white in colour. The seventh tergite is abruptly narrowed towards the apex, which is roundly pointed. The seventh sternite is much narrowed at the apex and is not distinctly carinate.

"This species stands close to *melanopa* Handlirsch, from which it may be distinguished by the different form of the seventh tergite, by the lack of a process on the sixth sternite, by the white spines on the anterior metatarsus, and the different form of the genital stipes. Length 17 mm."

Somali, Salakle, 7. VI. 01 (B. V. Exlauger). Type in the Zool. Mus., Berlin.

To judge by the genitalia and the seventh tergite this species is more closely related to *intermedia* Dahlb. than to *melanopa*.

B. regnata Parker. *Loc. cit.* p. iii, ♂, ♀.

B. speciosa Arn. sinks in synonymy. In the text Parker erroneously says that the joints of the flagellum are "neither spinose nor excavated", but in the fig. 181, plate 13 of his paper the eighth to tenth joints are distinctly although bluntly spinose. The ♀ of *regnata* from Langenberg, Nyasa, differs slightly from specimens taken in Rhodesia, but only in minor details of colour.

B. liberiensis Parker (figs. 50 and 50a). *Loc. cit.* p. 126, ♂, ♀.

"Type, ♂. Black: labrum; mandibles, except tips; clypeus, except a pair of large basal spots; spot on lower side of scape; posterior orbits narrowed above and not reaching the vertex; pair of small dorsal spots on posterior border of prothorax; spot on side of prothorax; small spot on lateral angle of propodeum; widely separated lateral spot on first tergite; interrupted fascia abruptly narrowed medially on second tergite; continuous fasciae on tergites 3 and 4, biemarginate anteriorly and deeply emarginate on posterior median line; interrupted fascia on tergite 5; pair of small lateral spots on sternite 2; spots and stripes varying in size on the legs; *pale yellow*.

"The flagellum is entirely black. Segments 8 and 9 are spinose and segments 7-12 show light-coloured specialised areas on posterior side. The apical segment is longer than the eleventh; in fact, almost as long as eleventh and tenth combined; it is slightly curved and roundly pointed at the apex. The legs show no special modifications. The second sternite bears a small, sharp-pointed, median process, and the sixth bears a larger, bluntly pointed, median process near the apex of the sternite. The sixth also bears a pair of conspicuous, curved, lateral carinae. The seventh sternite bears a pair of lateral, parallel carinae that do not extend to the apex of the sternite.

"Allotype, ♀. Black: labrum, except lateral borders basally; mandibles, except tips; apical border of clypeus; trace of anterior orbits; posterior orbits; obscure spot on lower side of scape; pair of small dorsal spots on posterior border of pronotum; spot on side of prothorax; vertical line on mesopleura; lateral angle of propodeum; widely separated lateral spots on first tergite; interrupted fasciae, all narrowed medially, on tergites 2-5, the interruption being wide on the second tergite and very narrow on the fifth; small lateral spots on sternites 1-5; stripes on femora, tibiae and tarsi of all legs; *pale soiled yellow*.

"The seventh tergite on the male is triangular in outline, narrow and truncated at the apex, whereas on the female it is rounded at the apex and is finely and uniformly punctate, except towards the apex, where the punctures are coarser and more scattered. The extreme apical portion is without punctures.

"Length 23 mm. Described from one ♂ and one ♀ from Liberia, Africa. The two specimens are in poor condition so that the exact shade of the maculations is uncertain."

Type and allotype in U.S. Nat. Museum.

B. albata Parker. *Loc. cit.* p. 127, ♂, ♀.

B. albopilosa Arn. is a synonym of this species. Both come from the same district, the coastal region of S.W. Africa.

B. agrestis Parker (figs. 51 and 51a). *Loc. cit.* p. 135, ♂, ♀.

"Type, ♂. Black: labrum; clypeus; mandibles, except tips; short, broad anterior orbits; spot on either side of anterior ocellus; space between antennae; scape below; posterior orbits not reaching vertex; narrow line on posterior

border of pronotum; apical half of tubercle; minute lateral spots on posterior border of metanotum; interrupted fascia on propodeum, broadest on posterior surface; continuous fasciae on tergites 1-6, the first narrow and somewhat sinuate, second enclosing a pair of dorsal black spots, third, fourth and fifth broadly biemarginate on anterior dorsal border; median spot on seventh tergite extending to apex; lateral spots on sternites 2-6; median spot on second sternite; femora in varying degree; tibiae, except large spot below on all; and tarsi; *yellowish white*.

"The flagellum is pale beneath and shows no special modifications, being neither spinose nor excavated. The middle femora are neither serrate nor dentate. The second sternite bears a median, laterally compressed tubercle whose sides are provided with numerous hairs as is the surface of the sternite generally. The sixth sternite bears a bluntly pointed, triangular median process and the seventh, whose apical border is emarginate at midline, bears a conspicuous median carina. The seventh tergite is truncate at the apex.

"The allotype, ♀, resembles the type very closely in its maculations. The colour is more yellowish than in the type. There is a spot on side of prothorax connected with spot on tubercle; a conspicuous spot on mesopleura; spot on side of propodeum. The sixth sternite is black. The sixth tergite is narrowed and rounded at the apex and the sides are only slightly sinuate. On its sides are found a series of short, spine-like hairs, among which are numerous long slender hairs, but neither extend to the apex.

"The wings on this species are hyaline. The pubescence is normal, being most conspicuous on propodeum and base of first abdominal segment. There is a slight carina between the antennae, and the anterior metatarsus is provided with six spines. Length 16 mm."

Asamara, Abyssinia. Type in Zool. Mus., Berlin.

B. gracilens Parker. *Loc. cit.* p. 143, ♀.

"Type, ♀. Black: narrow fascia on posterior border of pronotum, connecting large, lateral spots; tubercle and narrow line running downward from it on side of prothorax; narrow fascia on posterior border of scutellum; fascia on metanotum; interrupted fascia on dorsum of propodeum; lateral angles of propodeum; broad fasciae on tergites 1-5, first greatly narrowed (almost interrupted) at dorsal midline, second enclosing pair of elliptical, dorsal spots, third strongly and fourth weakly biemarginate on anterior dorsal border; small lateral spots on sternites 2-5; *yellow*. Clypeus, antennae, except tips above; narrow line between antennae and pair of spots between them; three spots on frons at level of anterior ocellus; broad anterior orbits deflected inward from eye-margins above anterior ocellus; posterior orbits; apex of sixth tergite; apex of sixth sternite; narrow apical lines joining yellow lateral spots on sternites 2-5; legs for the most part; *ferruginous*. The clypeus and mandibles, as well as the lower part of the posterior orbits, are more yellow than ferruginous. The tibiae and tarsi also show this mingling of yellow and ferruginous and the femora at the base are marked with black.

"The basal half of the wings is strongly infumated, whereas the apical part is hyaline. The pubescence is white and comparatively abundant on head, sides of thorax, and on propodeum. On the clypeus it is short, dense and silvery. The frons is wide, weakly carinate between the antennae, and the inner eye-margins are approximately parallel. The anterior metatarsus bears six spines. The disc of the second sternite is shining and bears scattered, coarse punctures. The apical part of the sixth tergite is plainly carinate at midline.

"In Handlirsch's table this species runs, although not accurately, to

B. tricolor Dahlb. It differs from that species in having no black on the clypeus and in the absence of any maculations on the sides of the mesothorax, metathorax and propodeum. Furthermore, the wings of this species are strongly infumated at the base, while the apical portion is hyaline. The insect is decidedly slender in form and the sixth tergite is broadly rounded at the apex. Length 17 mm."

S.W. Africa (S. V. Luebbert). Type in the Zool. Mus., Berlin.

Apart from the yellow fasciae on the scutellum, metanotum and epinotum, this description fits *fuscipennis* Lep. ♀ very closely, and I am of the opinion that Parker's species will eventually prove to be only a variety of that species.

B. liventis Parker. *Loc. cit.* p. 144, ♀.

"Type, ♀. Black: labrum; mandibles, except tips; clypeus, except pair of large, dark basal areas; scape below; lower part of frons; pair of rounded spots below anterior ocellus; broad, anterior orbits barely reaching the level of anterior ocellus; broad, posterior orbits, each greatly narrowed and interrupted at vertex; prothorax, except anterior transverse dorsal spot and dusky line in front of tubercles; broad, lateral lines and pair of very narrow, obscure, longitudinal, discal lines on scutum; narrow fascia on posterior border of scutellum; very narrow fascia on metanotum; shortened fascia on propodeum interrupted at midline; almost the entire side of propodeum (but not the lateral angles); anterior portion of metapleura; mesopleura almost wholly; fascia on first tergite narrow and interrupted at dorsal midline; fascia on second tergite broader, interrupted at midline and bisinuate on anterior dorsal border; fascia on third similar to that on second; fascia on fourth similar to those on second and third, but continuous; fascia on fifth broken into a central and lateral spots; apical portion of sixth; small posterior lateral spots on sternites 2-5; apical margin of sternite 6; legs, except more or less of the coxae and trochanters, dusky spot below on middle femora, and dark one above and one below on posterior femora; *yellow*, which varies in shade on different parts of body.

"The maculations on the dorsal part of the thorax and on the abdomen are decidedly pale, whereas those on the sides of thorax and on the legs show a tendency toward ferruginous. The flagellum is black above, but of a light shade of ferruginous below. The inner eye-margins are a trifle wider apart at the clypeus than at the vertex. The frons is broad and between the antennae strongly carinate. The basal half of the clypeus on the midline is also strongly carinate, while the median apical portion is somewhat flattened. Except the ridge of the carina and the apical flattened part, the clypeus is covered with fine, silvery pubescence. The anterior metatarsus bears seven spines. The disc of the second sternite is shining and on either side the midline are scattered coarse punctures, among which are numerous fine punctures. Only a small, median anterior area is free from punctures. The sixth sternite is slightly carinate on midline and is closely covered with punctures, in which coarse and fine are intermingled. The sixth tergite is broadly rounded at the apex. The wings are clear and the second abscissa of both radiella and cubitella is present, although the latter is much reduced. The pubescence on thorax, propodeum and abdomen is of normal character. The dorsal surface of the abdomen, when light strikes it at the proper angle, shows a beautiful, bluish iridescence, a character not common among species of this genus. Length 20 mm."

Mikidani, German E. Africa. Type in the Zool. Mus., Berlin.

B. longipennis Parker. *Loc. cit.* p. 149, ♀.

"Type, ♀. Black: labrum; clypeus, except a pair of narrow lines paralleling the basal margin; mandibles, except tips; frons to level of anterior ocellus, except pair of large black spots; scape, except small apical spot above; anterior orbits deflected inwards at anterior ocellus and reaching almost to vertex; posterior orbits broad below; prothorax, except three anterior black dorsal spots; broad lateral lines and long, narrow discal lines on scutum; fascia on posterior border of scutellum; fascia on posterior border of metanotum; curved fascia on dorsum of propodeum broadly extended on posterior surface; lateral angles and sides of propodeum almost wholly; metapleura; mesopleura almost completely; broad fascia on first tergite narrowed and narrowly interrupted at midline; broad fasciae on tergites 2-5, all slightly sinuate on posterior dorsal border, that on 2 enclosing pair of large, elliptical spots and acutely emarginate at median anterior border, that on 3 biemarginate, and those on 4 and 5 bisinuate on anterior border; apex of sixth tergite; pair of small anterior spots on sternite 2; lateral spots connected by very narrow apical lines on sternites 1-5, each apical line apparently interrupted at mid-ventral line by a dark ferruginous spot; legs, except more or less of basal joints, line above on all femora, narrow line below on tibiae, and small spot or line at base above on tibiae; yellow.

"The flagellum below is ferruginous; above it is quite dark but shades to ferruginous at the apex. The anterior metatarsus is provided with six spines, of which the basal one is quite small. The wings are hyaline and very long, reaching the end of the abdomen. The second abscissa of both radiella and cubitella is present. The frons between the antennae and the adjacent basal part of the clypeus are distinctly carinate. The sixth tergite is coarsely punctate and the apical part is distinctly ferruginous. The sixth sternite is distinctly carinate on the midline and, like the sixth tergite, its apex is marked with ferruginous. The disc of the second sternite is smooth and shining and bears numerous, scattered, coarse punctures. The paratype (♀) differs from the type in having the fascia on the scutellum interrupted at midline; in having the fascia on the first tergite reduced to lateral spots; in having the inclosed spots on the fascia on the second tergite reduced to anterior emarginations; and in having the fascia on tergite 5 narrowly interrupted at the mid-dorsal line. The ferruginous markings on the sixth abdominal segment are present, but less well developed than on the type. Length 22 mm."

Lake Nyasa, Langenburg. Type in the Zool. Mus., Berlin.

Apparently very closely related to *flavicineta* Turner from which it differs slightly in the arrangement of the yellow pattern on the tergites and in the presence of the ferruginous median spots on the apical margin of the sternites.

B. laeta Parker. *Loc. cit.* p. 151, ♀.

The description of this species fits in every detail with *B. intermedia* Dahlb. (= *olivata* Dahlb. Handlirsch) and Parker's name should be sunk as a synonym. The type of *laeta* is from Makonde, German E. Africa, and is in the Zool. Mus., Berlin.

Including the species brought forward in this Appendix, the total number of species, subspecies and varieties of Ethiopian Sphegidae described in this monograph amounts to 935. Of these, 324 are new forms described by myself, of which a large proportion is derived from material collected during the last eight years by Captain Stevenson, Mr R. E. Turner and myself, in only a small number of localities.

To show how much our knowledge of the African Sphegidae has advanced within recent years, we can take just one genus as an example. In 1915 Kohl enumerates only seventeen species of *Thyreopus* s.l. as known from the Ethiopian Region, whereas in these pages 39 have been described. It may therefore safely be assumed that with more intensive collecting in hitherto insufficiently explored areas the number of our Sphegidae will be very greatly augmented, and that 935 probably represents not more than two-thirds of the total. The areas from which many new species may be expected are, I believe, S.W. Africa and the Kalahari, the equatorial forest zone, and the mountainous districts in Abyssinia, Kenya and Tanganyika.

G. ARNOLD.

14th April 1930